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## Requeening With "Home Grown" Queens

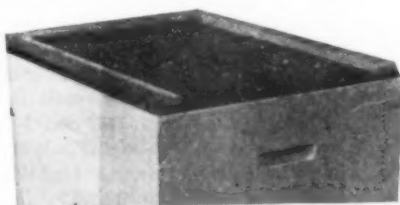
By Jay Smith.

**S**YSTEMATIC requeening is one of the most important features in good beekeeping and also the most profitable. While acknowledging that this is true, some have said it costs money to buy queens, and takes a good deal of labor and expense to rear their own queens. That is true, for anything that is worth while costs time and money. But one cannot escape the cost by neglecting to requeen colonies that have old, non-productive queens, for in such cases it costs many times more to keep an old queen in a hive and thereby lose a honey crop than it would to take time to rear a good young one. As methods of introduction have been discussed where one buys his queens, I shall confine my remarks in this article to requeening where one rears his own queens.

By systematic requeening I do not mean that all queens should be replaced at regular intervals, for there is a variation in queens, and if all queens two years old were replaced we would not discover those queens of extra quality that keep the hives filled with bees many years beyond the normal span. By taking advantage of this and using these queens as breeders, our stock can be materially improved. I used to recommend replacing all queens more than two years old, but now when a queen is doing well and keeps the hive well filled with bees and brood she is not killed, regardless of her age. Of course, sometimes we miss it, for a queen may do excellent work and in the fall appear to be vigorous, but die in the winter. This does not happen very often, however.

I believe a good rule is to look at every queen every year and replace all that do not appear to be doing the best of work. This will take from 50 to 90 per cent of them, depend-

ing largely upon the location and the amount of work the queens have done. A queen that is kept in a small brood nest and that has not been allowed to lay to capacity will last longer than one that has been worked harder. But she will bring less returns to her owner, and if we can get a queen to lay all of her eggs in one year instead of taking two or three, our profits will be larger in proportion to the number of eggs laid, provided they are laid at the right time of the year. A



Combined hive cover and bottom board

large brood nest and plenty of stores will go a long way in bringing this about.

It will take experience to tell when a queen is passing her usefulness. When a queen is large and vigorous looking, and keeps the hive filled with brood, she should be allowed to remain. Queens get smaller and darker in color as they get older; therefore with experience one should be able to judge in a large majority of cases.

In requeening, one can use laying queens or cells, if he is rearing his own. Each system has its advantages and disadvantages. I believe it will pay most beekeepers to have a number of nuclei and to keep on hand a number of laying queens to be used when wanted. Time is saved the colony in brood rearing, as the colony is queenless a much shorter

period, when introducing a laying queen, than is the case when a queen cell is given. On the other hand, it takes more equipment in the way of nuclei. For a number of years I have experimented in introducing both laying queens and cells at different times and have found that the advantages of one about balance the advantages of the other. For a few years back I have been trying a system in which the cell is used, and it has proved so satisfactory that I expect to use it on a large scale in the future. I have described this at many of the meetings of beekeepers this past winter, and as it seemed to cause considerable interest I will give it in detail here. This system may be used with profit in localities where the honeyflow is late and the bees build up too soon in the spring. In such cases they reach the peak of brood rearing too soon and the colony is becoming weaker when the honeyflow comes on. By putting the queen and the old bees in an empty hive body or extracting super and leaving the brood and young bees in another hive body and giving it a queen cell, two colonies may be made to grow where only one grew before. To bring this about, I have what I call my combined hive cover and bottom board, as shown in the cut. This is the equivalent of having two stands, but by the use of this combined cover and bottom board, which is very inexpensive, the cost of a regular hive cover, bottom board and hive stand is saved.

Now let us suppose that we are in a locality where the honeyflow is late and the colonies have a habit of building up too early in the season. They are at their height in brood rearing four weeks before the honeyflow comes on. Under such conditions the colony is on the down grade

when the honeyflow opens. A number of colonies had swarmed several weeks before and were not in good condition to make honey when the honeyflow opened. Again, many queens are old and should be replaced.

By the use of the method given here we can eliminate all of these undesirable conditions and bring the colony up to double the strength it otherwise would have been and in many cases the honey crop will be increased four-fold.

From four to six weeks before the honeyflow begins, or just before the bees are in condition to swarm, the colony is removed from its stand and an empty hive body with drawn combs or an extracting super is set on the bottom board. On top of this is placed our combined cover and bottom board with the entrance pointing in the opposite direction from the entrance to the bottom hive. This combined cover and bottom board is merely a thin super cover with lath nailed on three sides. This can be made of cheap material and costs very little. Many beekeepers like myself will have on hand a lot of old super covers that are getting shaky. These can be used for our purpose, and in the place of them, for a regular hive cover, the later model, which is much superior, can be purchased. On top of the combined board set the hive body containing the bees. Look through the hive and take the queen and run her into the entrance of the bottom hive. With her shake in the bees of not more than two frames. To the hive above give a queen cell. It is a well known fact that a colony put on empty combs and no brood will build up at a rapid rate. Therefore, instead of the queen slacking up on egg production just before the honeyflow begins, she will increase egg production. All swarming will be prevented, for the field bees, when they return, will join their queen in the bottom hive. In the meantime the cell in the upper hive will hatch and the virgin will mate and soon begin to lay. When the honeyflow comes on, the old queen below is hunted up and killed and the two hives of bees united by placing a newspaper between them. In a couple of days supers can be added as desired. As the colony now has a young queen and the hives have an abundance of brood, there will be no swarming that season. Furthermore, this colony will contain twice as many field workers and brood as would have been the case had the old queen been allowed to remain in the single hive and perhaps swarm. Several have been using this system

and have reported to me that it is a great success.

I have been using this system considerably for requeening alone, and it has proved so successful that I will use it more extensively in the future. The method I am using at present is for requeening only and has no reference to the honeyflow. As I remove many frames of brood for forming nuclei, my colonies are weak at the time I wish to requeen. To kill the queen and give a cell is to make this weak colony still weaker. My method, therefore, has been to wait till the hive contains as much brood as the bees can care for, which, for these weak colonies, is about four or five frames. I take away all the brood and put it in a hive body above, as has been described. The queen and the remainder of the empty combs are left in the hive body below. After the queen above has her five frames about filled with brood, the queen below will also have the combs filled with brood and eggs. The old queen is now killed and the two united with a newspaper. Two days later the frames above are set in the hive below, making eight or ten frames of brood, and the colony has been requeened, while with the old way there would have been not more than half the brood and bees. In one case the colony would be queenless two weeks, while with the other it would not be queenless at any time, but on the contrary it would have two queens for a period as long as desired. One other advantage is that in case one should fail at introducing the cell to the upper colony another cell can be given, and, as there is a queen below, the colony will not become unduly weakened. As in introducing cells to any other colony or nucleus, if there is not a good honeyflow on, feeding should be resorted to for at least one day before giving the cell.

(I am highly pleased to see that Mr. Smith does not insist, as some do, on changing the queens regularly, whether they are good or not. I have never been able to get the courage to kill a first-class queen, when she appears still first class, to replace her with one whose ability is problematical.—Editor.)

### Facts About Sanfoin

By R. B. Manley.

I have noticed from time to time that this plant attracts some attention in the American Bee Journal, and I think that you might care for a few lines by one who has grown it and seen it grow, both for hay and seed, for a good many years.

In the first place, the plant is one of the best and healthiest fall forage

crops and is especially suitable for sheep. It is possible to turn hungry stock into a field of it at any time without the least danger of bloating, which is very apt to occur in the case of most green plants, such as lucerne or alfalfa in particular.

There are two kinds of Sainfoin, which are very distinct in their habits. First, the "Old English." This plant, once a stand is established, will last for eight to twelve years and give a good crop of hay each year. It does not run up to flower the second time in one year, but produces a thick crop of leaves without any sign of stalk or flower stem. This crop is used here for sheep, and there is no plant that gives our lambs such a healthy appearance.

For hay, all Sainfoin should be cut about one week after the flowers come out.

The other variety is known as "Giant Sainfoin." Not that it is any bigger than the other, and I do not know why the word "Giant" is applied. This plant will flower again a few weeks after it is cut for hay, and if cut a second time will again flower; hence this is the best plant for bees. Its fault lies in the fact that it will not last more than a few years as a plant, but dies out after that time. The seed is much cheaper than that of the "common," or "Old English" variety, because seed can be saved from the second growth. The two are identical in appearance. In this country there is no plant I can think of that yields honey so certainly. While in full bloom, honey literally pours in from it and is of very fine quality.

One peculiarity of Sainfoin honey is that the wax cappings are always of a distinct pale sulphur color and sections of it have a very beautiful appearance. When a comb is partly sealed of Sainfoin honey and finished with white clover or other honey, the comb will show distinctly by the color of its cappings where one ended and the other began.

One of your Wisconsin beekeepers was here recently and I was able to show him Sainfoin in full bloom for the first time in his life. This was Mr. Lathrop. He told me that much of the land on limestone in Wisconsin was very similar to our Oxfordshire land, and that being the case, it does seem a pity that you people should not try Sainfoin.

I am sending a one-pound sample bottle of honey that is as nearly pure Sainfoin as can be had. The raising of Sainfoin seed requires very great care, as if mowed too dry the seed is liable to drop off. It should be cut while still quite green and put into cocks almost at once and moved to the stack while dew is on it in early morning.

England.

# Tongue Length and Honey Storing Ability

By Ray Hutson.

THE apicultural press thirty years ago was thrown into a great furore over A. I. Root's Red Clover queen, whose progeny was able to collect nectar from the red clover (*Trifolium pratense*) because of their long tongues. J. M. Rankin (1) reported an increase of .9mm. in tongue length from crossing. After the first excitement died the stocks degenerated because of the impossibility of obtaining pure matings. Zander (2), Kulagin (3), and others worked on the length of tongue between the first period and 1922 when J. H. Merrill (4) reported a correlation between tongue length and honey production. A comparison of the lengths reported by these men is afforded by Table 1.

Table 1

Zander	6.00 mm.
Kulagin	6.21 mm.
Rankin	6.31 mm.
Merrill	3.67 mm.

Zander and Kulagin measured from the submentum to the tip of the glossa; Merrill measured the glossa; Rankin does not report how he made his measurements.

These papers suggest, and Merrill's paper specifically states the existence of, the intriguing possibility of a correlation between a measurable physical characteristic and honey storing ability. The following test was a direct result of speculation on various applications of such a correlation in breeding work.

1. Rankin, J. M., "Breeding Bees to Increase Length of Tongue," E. S. R. XI, 61, 1062.

2. Zander, E., 1911, "Der Ban der Biene," 182 p. p., 149 figs. 20 pls. Stuttgart.

3. Reported by Zander in 2.

4. Merrill, J. H., 1922, A. B. J., p. p. 310-311.

Paper No. 282 of the Journal Series, New Jersey Agricultural Experiment Stations, Department of Entomology.

One hundred bees from each of fourteen hives were killed, decapitated, and the heads kept in 70 per cent alcohol until examined. The examination consisted of measuring 60 glossae (tongues) from each lot after soaking 24 hours in 1-2 per cent sodium hydroxide. The measurements being taken with a calibrated ocular micrometer fitted into a binocular microscope (1).

Table 2 is made by arranging the results of the measurements in order, beside the ranking of the same hives in honey production and number of bees.

Table 2

Tongue Length	Honey	No. Bees
1	13	5
2	1	1
3	7	9
4	14	11
5	8	4
6	13	13
7	12	12
8	10	7
9	9	3
10	3	2
11	5	11
12	11	10
13	4	6
14	6	8

An inspection of this table fails to reveal any marked constant agreement between tongue length and honey stored. The agreement between number of bees and honey stored and number of bees in the hive is much more evident. That does not, however, say that number of bees is the most important factor, for the relative age of bees at the time of honeyflow, the absence of swarming fever, etc., all have a bearing. In any consideration of tongue length the following quotation from Snodgrass (1), Hutson, Ray, 1924, "High Production Strains," in Rpt. N. J. Agr. Expt. Sta., 1923-24.

"Anatomy and Physiology of the Honeybee," (pp. 44-45) is pertinent. "The group of long-mouth appendages of the bee projecting downward from the lower part of the head behind the mandibles constitutes the proboscis. We should like to call this the 'tongue,' as does the beekeeper who is not hampered by too much scientific learning, but the part in question is not the tongue, nor is it structurally a single organ, though it acts as such. This statement is especially significant when considered alongside another quotation from the same author (p. 58), 'The reach of the tongue may depend on the extent to which the proboscis as a whole may be protruded.'

## Urge Honey In Diet of Children

By Wallace Piper.

The value of honey in the diet of young children is receiving more attention than formerly.

Dr. Carl Pucket, health commissioner of Oklahoma, has recommended bread with honey or jelly for infants from 12 to 18 months of age. Inasmuch as Doctor Pucket supplies the papers of state with material,

some good educational work has been done along this line.

While it may be a bit technical, honey producers likely will be interested in a digest made by the Journal of the American Medical Association of an article about using honey for infant feeding, published in the New York Medical Journal and Medical Record for August 2, 1922:

"Luttinger asserts that honey is indicated in any condition of the intestinal tract in which the assimilation of starch or the disaccharids is delayed and when prompt absorption of energy is desired. (Note—Physicians use the word 'indicate' in the sense of 'to point to as the proper remedy.'—W. P.).

"A solution of honey in water (one teaspoonful of honey to a glass of water) is almost as quickly absorbed as alcohol, and its effect is more lasting. The largest part of the honey sugar is fructose (levulose), a levorotatory monosaccharid which seems to have a peculiar affinity for the body cells; thus it is rarely, if ever, found in the urine of diabetic patients. It is more readily absorbed than lactose and it has not the disadvantage of undergoing butyric acid fermentation like maltose; hence it does not produce acidosis. Its rapid absorption prevents it from undergoing alcoholic fermentation and infants fed on honey rarely show signs of flatulence. (Note—Flatulence is defined as generating gas in the alimentary canal.—W. P.) Another advantage of honey over sugar is its protein content, mainly derived from the pollen of plants. Fresh honey, especially virgin honey directly obtained from the honeycomb, has a decided laxative action which it loses on boiling. Luttinger uses honey as a routine component of all his formulas for substitute infant feeding. The results obtained, in 419 cases studied so far, lead Luttinger to plead for a more general use of honey. He also uses honey in marasmus, rickets, scurvy, malnutrition and other conditions in which he formerly prescribed the various sugars, cod liver oil or patent foods."

Surely most children would welcome honey instead of cod liver oil!

Another advocate of using more honey for children is one of the feature writers for the Associated Editors, a prominent newspaper syndicate. She tells of "Graham Candy" as follows:

"One mother says: 'When other children come into the house munching on candy and my tiny youngster demands the same, I have small squares of graham crackers purposely cut and dip them into honey.' She accepts this beneficial sweet as 'candy.' Having never known anything else she does not crave any other candy."





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### Trip to the Lawrence, Kansas, Meeting

On July 4 I attended a meeting in the yard of Mr. X. J. Kennedy. Some seventy or eighty beekeepers were present and the occasion was very enjoyable, in spite of the torrid heat. Beekeepers of Kansas and Missouri were in attendance with their wives, and a basket picnic made the meeting convivial as well as instructive.

Those who know J. F. Diemer, of Liberty, Missouri, know what a cheerful companion he is. Mr. Diemer brought a puzzle, which I cannot express better than in his own words:

"In my efforts to rear a lot of good drones, to fertilize my young queens, drone foundation is put in the hive containing a last year's queen.

"At this time of the season the bees try to change the drone comb into worker comb. I have several such combs now, that are filled with about 90 per cent worker and 10 per cent drone larvae.

"Dallas Lore Sharp truly says: 'There's a lot more to beekeeping than just hives and honey.' It seems that the bees were determined not to rear drones, but in changing drone foundation to worker comb the wonderful mechanical powers of the honeybee seem to be lacking. Imagine a lot of worker bees growing in cells that are square, three-cornered, round, and all sorts of shapes; and when they went as far with the change as they could there was left a drone cell here and there that could not be changed, because it was surrounded by a lot of diamond-shaped worker cells. The drone cells were too large for one worker and not big enough for two, so the queen just dropped a drone egg in all these.

"Friend Burrill might say that those bees, being only six weeks old, or less, did not have the experience that older ones have that went through a long winter. Naturally a bee six months old should know more than one that is only six weeks old. It would be interesting to try these old intellectuals on a full sheet of drone foundation.

"The more I study bees the more it looks like they were governed by instinct, same as a box-hive beekeeper, but a much finer instinct.

"Now the big question is this: Did the queen want to lay drone eggs when at the same time the bees showed, by changing the shape of the cells, that they were opposed to rearing any more drones? Does the queen fertilize the eggs when she wants to, or is it the pressure on her abdomen when laying eggs in worker cells, and the absence of pressure when laying in drone cells? I believe she lays fertile eggs in queen cells, which are larger than drone cells.

"This comb is a wonderful, bungled-up job of mechanical ingenuity. But they did the best they could."

A couple days later, after a visit to my nephew, Miles Baxter, who runs a big apple orchard as well as a few colonies of bees, near Leavenworth, I went to visit Diemer and saw those combs of drone foundation changed by the bees to worker combs. They are surely a queer sight, for nearly all the cells are irregular and very few

of them can contain brood. But the queen did lay worker eggs in the fairly well shaped worker cells, and drone eggs in the larger cells. So it would appear that the queen cannot well help laying drone eggs in the drone cells. Now, if we try to answer Diemer's questions, how does it happen that the queen lays eggs in queen cells, when she surely hates to see queens hatched in them, and does she know what she is doing? I still believe, as my father suggested, that the queen has a certain pleasure in the pressing of the spermatheca, for the fertilizing of the egg and the changing of it into a female egg, and that it is only when she is tired of that spasmodic action that she seeks for drone cells, which enable her to lay eggs without the pressure on the spermatheca. But this does not solve the entire problem. We don't know it all yet, do we?

Diemer is the man who had bees change worker foundation into drone comb. See page 134 of April, 1921, of the American Bee Journal. We are going to have a picture of the reverse, from Mr. Diemer, in one of our future numbers. Why is it that Diemer gets those freaks worked out by his bees? Is it because he is a freak himself, or is it that you and I do not look carefully enough in our hives to find just the same, happening now and then?

While I am on this subject, I want to say that Diemer is surely a freak in more ways than one, for he has such quiet bees that we could remain among them, in a very crowded yard, during a storm, and all the evening following, without a single bee becoming excited or displeased. In fact we remained in the apiary, close to the hives and nuclei, until bedtime. A visit to Diemer is an education, even for experienced beekeepers.

And let me mention here the statement of a writer (I have forgotten his name) who mentioned a lot of women as very indignant at a beekeeper who asserted that queens could tell beforehand what sex the eggs were to be which they were about to lay, when they, the women, never know beforehand the sex of their own child. This would appear to give more wisdom to the queens than to human beings.

Mr. Kennedy, at whose home the meeting took place, is a nature lover as well as a beekeeper. He has a nice little place in the less settled part of Lawrence and has all sorts of flowers, some of which are cultivated wild flowers. With his wife, two sons and a pretty daughter he entertained the beekeepers in a fine way. The weather was hot, but cold water constantly on tap helped to make it a little easier.

### Beekeeping Lengthens Life

"L'Apicoltura Italiana" of May quotes some other magazines which give instances of long life among noted beekeepers and adds its own comments:

"One may live old, keeping bees and eating honey. Reaumur lived to 74, Hruschka to 75, Huber to 81, A. I. Root to 84, Langstroth to 85, Charles Dadant to 85, Rauschenfels to 87, Hopkins to 88, Dr. Miller to 89, Dzierzon to 94. The list may be enlarged with Italian beekeepers: Count Visconti di Saliceto lived to 86, Dr. Colantoni to 75, Dr. Triaca to 77, Carlo Perucci to 72, L. Sartori to 87, Professor Chiapetti to 76, and many others might be added. What we want to notice is that the beekeepers of our acquaintance look healthy and have juvenile vigor. Blessed be beekeeping which prolongs existence and gives health and vigor."

To this list we may add the name of Thomas W. Cowan, of England, who has just died at 86.



## Tennessee Horticulturists and Beekeepers

Tennessee has a very good method of gathering its horticulturists, nurserymen and beekeepers in a state meeting every year. The twenty-first annual meeting of those associations was held at Chattanooga, January 18-21.

In the horticulturists' meeting Mr. W. L. Walling delivered a very able address upon the "Relation of Beekeeping to Horticulture." He emphasized the usefulness of bees in the fertilization of flowers. Addresses of this kind do a great deal of good. There were also, in the beekeepers' meeting, two addresses on the marketing of honey, by Jere Frazer, of Lynchburg, Virginia, and by E. W. Atkins, of Watertown, Wisconsin. Dr. G. M. Bentley, state entomologist of Tennessee, is treasurer of all three of the above mentioned associations, and much of their success is due to his activity and perseverance.

## Treating Versus Burning Foulbrood

I am in receipt of the following enquiry from a deputy inspector of Illinois:

"I see that you are not in favor of destroying colonies infected with American foulbrood. But in the district where I inspect, many beekeepers are just bee owners and do not pay attention to their bees. I cannot get them to buy new hives, and their bees are in box hives. I do not see how I can do successful inspection if I do not burn up the colonies that are diseased, when they are in box hives or crooked combs in movable frames, and the owner will not agree to help. What do you say?"

In that case, there is surely but one course left to pursue, and that is to burn up the entire hives, bees and combs. Let us hope that such ignorance and carelessness will not continue, for that is the greatest obstacle to a clean district. They have probably more of that in the South than we have here, and that is why they appear so determined to destroy all disease by fire.

## Dr. Phillips In Europe

We again heard of Dr. Phillips and wife in southern France, at the apiary of Victor Dumas, one of our contributors. We will publish a photo of them in our next number. Now we get a letter signed by both of them, by Mathieu and Colleville of Chateauroux, Baldensperger, Touratier, Valois, Couallier and others, without forgetting Giraud, the president of the National Syndicate of Beekeepers, at the home of Abbe Delaigues, one of the noted authors of books on bees in France, in the little city of Ecueille, Indre. The Phillips will be in England long before this is published.

## Large Brood Chambers

During the last few years, experiments made by several scientists, in measuring the amount of brood produced by queens, have indicated that many queens do not lay over 2,000 eggs per day, instead of the 3,000 to 3,500 that Charles Dadant gave as the number a first-class queen could and should lay during the height of the breeding season. As Mr. Dadant did not measure, as did the scientists, inch by inch, every patch of brood, it is held that he erred in his computation. But did he?

Dr. C. C. Miller, one of the best honey producers that ever existed, held, at one time, that an eight-frame hive was sufficient. Then he was led to try two eight-frame hives, one above the other, for brood chambers, at the time of the heavy breeding of spring. The upper brood chamber was removed by him, at the beginning of the honey harvest, placing all the best combs of brood in the remaining hive and using the balance to strengthen weak colonies. It was then, and owing to that management, that Dr. Miller made the record crops that made him famous.

In our own case, I am very free to admit that I never

counted, inch by inch, the amount of brood that a prolific queen produces. But when we kept Langstroth ten-frame hives and Dadant hives in the same apiary, by the hundred, I found, invariably, that when we put the supers for extracting over the brood chambers, at the time of the heavy laying, the queens of the ten-frame Langstroth hives would ascend into those supers and breed in them, while the queens of the Dadant hives, which are much larger, would rarely do it. Investigation proved in every case that the queens in the Langstroth hives were crowded for room, while the others still had ample room, since each comb was over two inches deeper than the combs of the Langstroth and ten combs of Dadant size made more surface for breeding than twelve combs of L size. Without having recourse to measurements, this is a very good evidence that the Langstroth ten-frame hives are inadequate for the brood of prolific queens, let alone keeping the bees in eight-frame hives. Yet some lovers of old methods, writing in European magazines, would have the world believe that the old skep, with a measure capacity of four or five gallons, was the best hive. Such people consider a crop of from ten to thirty pounds of honey as a very satisfactory surplus. They cannot imagine a crop of 100 to 250 pounds or more and are ready to accuse the American beekeepers of misstatement.

Personally, I cannot imagine the possibility of securing several hundred pounds of honey from a colony whose queen lays only 2,000 eggs or less in the high breeding season.

The present use of what is called a "food chamber," recommended by some of our best authorities, when running an apiary of Langstroth hives, is to me the best evidence of the insufficiency of the ten-frame L brood chamber. With the large hives this is unnecessary. All the honey the bees will need for spring breeding will be lodged in the brood chamber of an eleven-frame Modified Dadant hive, if it is only stored as it should be.

That the large hives are best, because they afford larger colonies through greater breeding, is proved by the reports of practical beekeepers who have tried them on a sufficient scale in England, France, Switzerland, Italy, and even in Russia, besides the United States and Canada. It is true that many people do not approve of them. For instance, Mr. Gooderham, Dominion apiarist, at Ottawa, reports larger crops from his Langstroth hives than from the Dadant. But in the same city, Ottawa, a Belgian beekeeper, Mr. Tissot, who is running several hundred colonies, is ready to tell the world, and publishes it at every beekeepers' meeting, that he never made beekeeping the large success he has had until he used the large hive for a brood chamber. He uses all of his discarded Langstroth brood chambers for supers, and reports averages of from 100 to over 200 pounds of honey. What are such results due to, if not to greater laying of the queen at the time of the heavy breeding? We can repeat here the motto given out by that practical beekeeper, George S. Demuth: "You must breed your bees for the crop and not upon the crop."

Do not let the reader understand that I want him to transfer his bees from L hives to the larger ones, for he can succeed, as many have done, with the shallower hive. Neither let him imagine that I am advising the use of a larger hive from a mercenary motive. We do not manufacture hives. We have no patent on hives. We sell hives made by others, and it is of little moment to us whether a beekeeper buys one kind or the other. We have never sold a single hive in Europe, and all the notoriety secured by the large hives comes from the comparative tests made by beekeepers, in their own yards. In our own case, as is evidenced in the "Dadant System," it was the comparative trials which convinced us of the advantages of the deeper frame.

Since the above was written, I have taken a trip to the Kansas meeting, at Lawrence, and there I met two beekeepers who asserted that if Dr. Merrill had tested queens from their apiaries he would have found greater breeding than he did. The matter is still open and I do not doubt that our scientists will continue their investigations.

# Economy in Honey Production

By G. H. Cale.

THE economic factor is one of the major influences in our lives and we are all fundamentally interested in the state of our pocketbooks. If the pocketbook is flat no optimist in the world can make the majority of us see the sunshine. If it is full all the world is bright and everyone is a good fellow.

Not even the preacher is exempt. I am reminded of a story of a colored doughboy in France who went, in distress, to the "Y" hut and asked the chaplain if he might write a letter to the Lord. "Yes," said the chaplain, indicating paper and ink. The boy sat down, wrote his letter, and handed it to the chaplain, asking him if he would send it to the Lord. The chaplain consented and after the boy had gone he opened the letter and found the following:

"Dear Lord: I am powerfully in need of \$25. Please send same and oblige.

"Most respectfully,  
"Sam."

The chaplain was deeply touched. He asked some of his friends in and explained the request that Sam had made, saying that since Sam had such simple faith, it was a shame to disap-

point him. Consequently they took up a collection and got \$15 (not \$25), which was put in an envelope for Sam. When he received it Sam came post haste back to the hut, where he wrote another letter to the Lord. This letter read, "I thank you Lord for the money, but when you send money to me hereafter please don't send it through no Army Parson."

The basis of economy in our bee-keeping practices lies in keeping an accurate account of expenditures and receipts. This, of course, entails the keeping of records. At the Dadant apiaries we have instituted a system of record keeping which suits our requirements satisfactorily and which has been of some interest to other beekeepers. I give it to you here for what it is worth.

We have three types of records—the apiary record, the colony record and the summary record. They will be considered in the order mentioned and a sample of each is given to show the style and makeup.

The apiary record, as you will note, indicates several things which are important for us to know in making up our cost of operations. It

gives a strict account of labor and just how this labor is proportioned to the different kinds of work done in the yards and in the honey house. It also gives a strict account of the mileage of transportation.

There are several things brought out by these records which will bear discussion. Under the item "Machines" we show the kind of car used. In keeping a record of the cost of maintenance and operation of cars for several years, it has become apparent that the cheapest car we can use is the Ford. However, the rapid adjustment in the prices of cars which is taking place now may make it possible to use other cars to equal advantage.

The labor element in transportation is a factor not always so apparent as it becomes in our records. When it takes an hour and a half to go from one apiary to another, as shown in the record herewith, with two men in the car, three hours of labor are used without profit. It is highly important, therefore, that the work be arranged so there will be a minimum of labor of transportation.

The condition of the roads also be-

## APIARY WORK

Apiary Brown's Ford

Date June 1 1924

	Time	Machines	From	To	Time	Miles
What done <u>Gave full hive bodies</u>		<u>Small Ford</u>	<u>Home</u>	<u>B. Fd.</u>	<u>2hrs</u>	<u>24</u>
<u>as supers to 50-54-55. Gave</u>						
<u>supers throughout.</u>	<u>5hrs</u>		<u>B. Fd</u>	<u>Home</u>	<u>1½</u>	<u>24</u>
<u>Looked at few for queencells</u>					<u>¾</u>	<u>48</u>
<u>and requeened 100-91-56</u>	<u>1hr</u>					

5½

What needed:

Watch for supers in week

What left:

Remarks: clover fair, some nectar  
Blackberries in bloom.

Signed Geo. Watt Total hours 9 hrs  
G. H. Cale 9hrs

Apiary Record, for labor, mileage, jobs, general yard conditions

comes a factor of great importance. On a hard surfaced road, between the home apiary and our most distant eastern outyard, twenty-two miles away, the labor of transportation is only three hours for the round trip, while a same amount of labor is usually required for the round trip to a yard only ten miles from home over a poorly conditioned dirt road.

The apiary record also makes it possible to keep an approximately exact account of the cost of labor for different kinds of apiary work. At the end of the year we can tell just how much time has been used in requeening, uniting, packing, unpacking, putting on and taking off supers, extracting, keeping yards in shape, repair and conditioning of honey house, and so on.

By skillful planning it is possible to handle the labor so that the most costly labor will be used for the most skillful work and the least costly for such work as cleaning up apiaries, painting hives, cleaning houses, and jobs of a more elementary character. It is also possible to arrange the work to be done so that all the labor shall be expended to the best advantage. It is necessary to give thought to planning, by careful study of the current apiary records at the office, so a work sheet, embodying the directions and suggestions for the day's or week's work, can be issued, with everything arranged with a view to labor saving.

We have found it important that

the trips to the outyards be started early in the morning, the load to be taken having been prepared the day before. Long, busy days at the outyards are the most profitable. It has also been to our advantage to pay overtime, so that the men will be satisfied to stay until dark at the outyards, if it is necessary.

Of course, this whole system is out of line with the possibilities, or even with the needs, of most beekeepers, unless they, like ourselves, are engaged in beekeeping on a large scale, where it is necessary to hire men with experience and pay them well for their skill. The average beekeeper manages to do most of his work with his own labor or that of other members of his family, only occasionally needing to hire someone outside. In our case, the most skilled men are paid as high as \$4.50 a day, and they often put in enough overtime to bring the average pay up to \$5.00 or \$6.00. This makes of beekeeping a business comparable to any other industry and is, I believe, the basis on which most business men would be apt to consider it. If it is not possible for beekeeping to show a profit under such conditions it will not be a permanent attraction to those trained for larger business enterprises.

#### The Colony Records

The colony record serves a useful but different purpose from that of the apiary record. The colony record shown here is one which was de-

vised after communication with a number of men who, we knew, had used such records and were in a position to give us worth while opinions. Therefore, it is partly our own and partly a composite of other records.

It was our intention, when we first devised these, to keep a careful record of every colony in our apiaries, but it soon became apparent that it would take one man's time to keep up the records while the other man did the work. This was too impracticable. Afterwhile, therefore, we gave up the idea of keeping complete colony records and now only use them to keep tab on abnormal conditions or things which need attention or continued observation.

The details of the colony records are apparent in the sample. The "Crop" item may need explanation. Whenever we put on a super, we fill in the side lines, appearing at the left of the horizontal lines, under the heading, and give the date as shown. The "Food" item was not as useful as we thought it would be and we find now that we even write the word "short" or "O. K." less and less frequently. It should be used more.

The up and down lines, above the word "Food" represent the hive and its frames, and here we mark such items as drone combs, poor combs, amount of brood, or other conditions. The drone and poor combs are later removed and foundation substituted.

The item "Weight" is for fall use

Apiary Sack Colony 27 Dates 1924-3/29-19/25 Weight 110

Queen record Home Yards #28 - Fall 1923 Crop Spr 90-Fall 60

<u>3/29</u> See stores	<u>4/15</u> Looks likely for breeder	<u>4/1 - Gave</u> super wonderful queen	<u>19/8</u> <u>9/25</u> <u>6/25</u> <u>4/12</u> <u>6/1</u>
<u>6/25</u> No cells. brood fine	<u>7/15 - Crop</u> off	<u>8/20 - Bees</u> bright, gentle	
<u>9/25 - Gave</u> supers for fall crop	<u>10/8 -</u> marks for breeder	<u>10/25 -</u> Packed	

Food  
OK - 3/29

Colony Record, for individual colony use to record things to be especially cared for or conditions of special importance



and has become of less value now that the records are not used for every colony. The figure after the word indicates whether the colony has sufficient winter stores or will need feeding. The twelve large record squares are very convenient and allow a running record of the work on the colony to be kept.

We find these records of especial value to keep tab on developing drone layers, queens which seem to

be failing, suspicions of disease, or colonies or queens of unusual value. We always carry them to the apiary, so we can look over the numbered colonies without unnecessary examination. Usually the first thing we do in the yard is to attend to these colonies.

#### The Summary Record

From a study of the apiary records, we can make up a record which


will give us the cost of operations for the year, at a glance. In the sample shown, I have divided the two elements, labor and mileage, as indicated. This is the first record made under this system and you will note, under the item "Crop Off," an excessively heavy expense, both for mileage and labor. By a revision of the working schedule, which was previously poorly arranged, it was possible to reduce this item to very material advantage. The use of this summary record is apparent from this one example. It is possible to bring about savings in the cost of labor and mileage, by noting those factors which are above their estimated normal and, having them as indicators, a study of the detailed work, given in the apiary records, will show how to plan changes which will be of value.

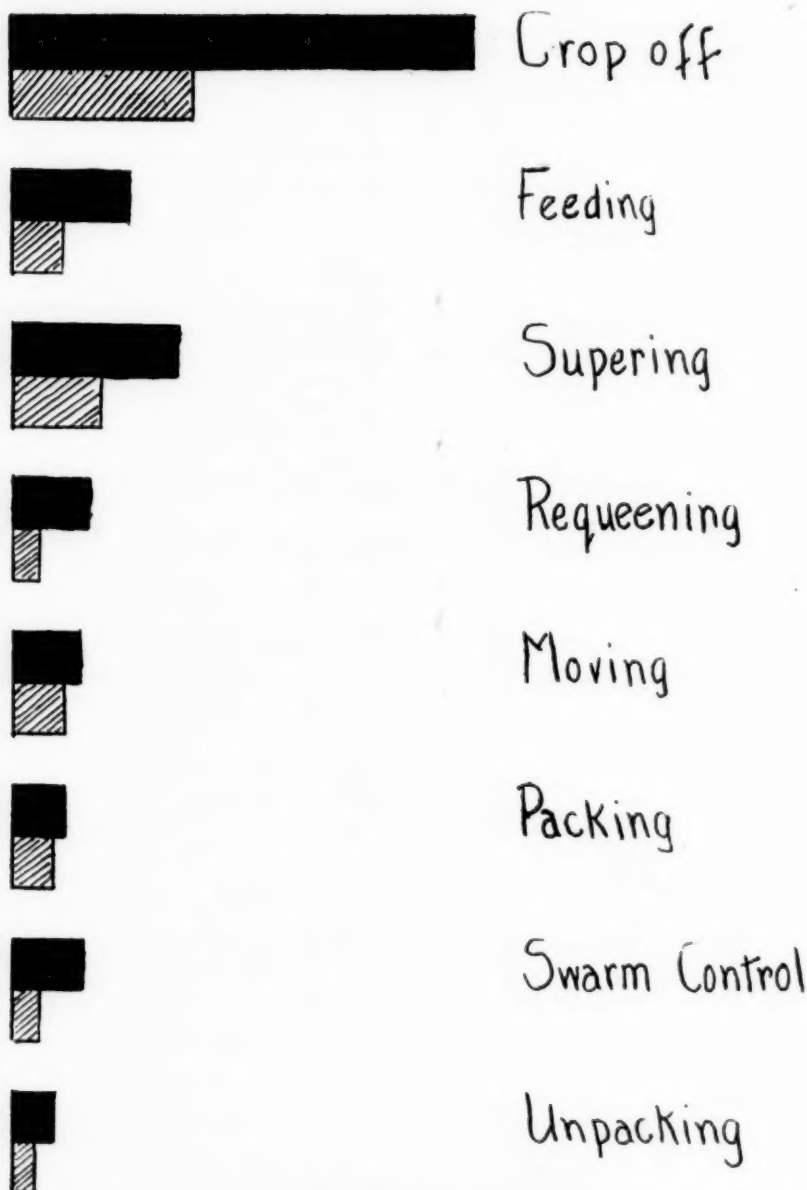
None of these records are presented with the idea that they are universally adaptable. It is most likely that they are not. Neither do I claim that they are ideal and, as soon as our present printed stock of records is exhausted, there are several changes which will be to our advantage to make. One trouble with records which is probably quite general is that there is a temptation to neglect making them out, and also a tendency to slight the details of the record so they are of less value for analysis.

There is no way to make the individual keep a record if the task is distasteful, but if the value of the record becomes apparent, most of the men are willing to do their best. Probably a much simpler record would be better in the small apiary. The form and kind of record is not important. The important thing is that some kind of a record be kept so that an approximate notion may be secured of the cost of production and of the exact amount of returns which the bees are giving. I venture to say that, if an honest and all inclusive record were maintained, many apiaries would be found unprofitable.

One of the delightful things about beekeeping, however, is that the bees usually represent something more than profit and loss and to many the need of records is not great. They get pleasure and health and the out-of-doors as part pay and the fact that the bees may be costing them something above the returns is of no concern, as it is money well spent. This element is decidedly a large factor in beekeeping and always will be. However, there are those of us to whom the bees mean bread and butter, and it is to those that this particular article will appeal most.

Labor  Mileage 

 = \$30.



The Summary Record. Note the heavy expense for handling the crop. This record showed it as a weak spot and helped in planning to reduce this item

# Finding the Queen—A Trick for Beginners

By C. M. Ewing.

**B**EFORE coming to the trick it might be well to state a few general principles helpful at finding the queen. Two principles are outstanding: First, to have the fewest number of bees in the hive, and, second, to have an even distribution of those few bees on the combs. The population of the hive may be the least in the early morning, when the workers have just gone to the field, but it is often too cool to open a hive then. Any time in the middle of the day, when most of the workers are out, is a good time, but one should never try it after 5 o'clock in the afternoon or at night. The population may be further reduced by gently setting the hive aside, and on its stand placing an empty hive containing several combs to catch incoming field bees. An even distribution on the combs is best obtained by no smoke, and by very gently taking out the combs—no matter how long it takes. If the bees ever start racing over the combs and ball up in clusters, one may as well close the hive for a while.

Now as to where to look and what to look for: Get on the trail of the queen. She will not be on a solid block of honey, nor on a solid block of brood. Search the combs for eggs—fresh eggs; that is, where there are no eggs hatching. She is more likely to be found near the bottom of the comb. I was told to "look for a yellow streak." This is a poor slogan. It assumes that the queen is yellow and is running. If I had to give a slogan, I should say, "Look for length." The queen is the longest bee in the hive. Drones are short, stubby and fat—the "Fatty Arbuckles" of the hive.

I used to spread the brood, instead of crushing the head of a queen who would not spread the brood. I would go around generally, putting one brood comb in the center of the brood nest, then return the following day or the second day for another addition. One day it dawned upon me that every time I raised up this new comb the queen was upon it.

The trick: This, then, was an easy way to find the queen. Drop a brood comb (the blacker the better) in the center of the brood nest; return the next afternoon or the following day; take the comb out very gently, and the queen will be found on the comb. Now, of course, there are conceivable conditions under which this would not work. The queen might be working in an upper story. She might have entirely "laid up" the

comb, etc. But as long as I used the kink, it worked, and I pass it on for what it is worth.

But this article does not tell how to find a virgin queen. Alas! a virgin queen is hard to find, especially if she is small and black. Like a vanishing airship or the first star of evening, you are looking directly at her; look away, then look again, and she is gone.

There are expedients to which one may resort if it is very necessary to find the queen at once. The bees may be driven up against a queen excluder, or smoked down over one, or they may be shaken in front of the hive after a strip of excluder has been placed over the entrance. The difficulty with the last named method is that there is always congestion of drones and field bees, and one has to wait quite a while for the situation to clear up. But it works, and it takes no time in preparation.

Finding the queen is an art. With long practice, one acquires a keen queen eye. The queen is easiest sighted on the next comb—that is, the one which has not yet been lifted. There, when she is scurrying downward away from the sunlight with wings lifted, she really looks like the big bee which the *hoi polloi* believes her to be. There is no mistaking this receding Zeppelin. The large abdomen is usually a shade of color different from the workers, which fact assists the eye.

I would hesitate to claim that the trick here given is a new idea. I have not seen it given in my reading of bee literature during the past five or six years. The moment any modern beekeeper announces some manipulation which he believes to be new, someone rises to state that Doolittle advocated the same thing in 1887.

Too much stress cannot be laid on spoiling the operation of the trick by smoke. This manner of finding the queen might be called the sneak-upon-the-queen, or stalking, method. Some apiarists have a habit of moving fast from hive to hive, jerking up the cover, shooting under it huge blasts of smoke. This may work in taking honey, but it will not work in finding the queen. It spoils the even distribution on the combs, causes the bees to collect in clusters or to race about the walls of the hive—the very worst place to find a queen. Leave the smoker at home; slip a match in the pocket, take a few stings; it will help your rheumatism. California.

## Wild Honey

By Charles Hofmaster.

Here is a little episode which shows at least the value of clever advertising even if unwittingly done on account of ignorance of the real facts: Last fall I happened to go into a grocery store in a town in the farther neighborhood. There I noticed on the counter a clean, but somewhat battered, tin tub, filled more than half full with some nondescript chunk honey. Most of it was irregularly built combs, half of it was unsealed honey; there was a liberal sprinkling of pollen, and my trained eye detected here and there a capped brood cell, besides some traces of other impurities, as little bits of rotten wood and bark. Evidently some hill-billy had brought in that mess,—unmistakably the spoils of a raid on a bee tree in the woods.

The busy grocer, noticing my inspection, spoke up and said importantly, "Wild honey," and, seeing my raised eyebrows, he explained: "Made by wild bees; just brought in this morning. Want some?" I did not want any, of course. Instead, I did want to give the man the proper information on his erroneous notion of "wild" honey, but refrained from it. Giving correct information to an ignoramus often acts like a boomerang; if you cannot get the information to soak in, you may be considered yourself an ignoramus. The good man was certainly no price cutter, as the honey was marked 25 cents per pound, although I feared, at that price, the honey would prove a white elephant on his hands. Next day, my bee man's curiosity brought me back to that store. My good groceryman was there, but the tub was gone. To my inquiry about the "wild honey" I got the triumphant answer: "All sold; could have sold more; many people like wild honey better than tame honey," nodding towards a row of quart jars of bottled honey on his shelves. "It has a much keener flavor, is much healthier, too," and, mistaking the motive for my inquiry, he added: "Sorry you are too late; you ought to have grabbed at your chance yesterday. Anything else I can do for you?"

There was nothing else to be done for me; I was floored. May I be pardoned if I add the classical exclamation, "Can you beat it!"

Oklahoma.

### Wyoming Testing Carniolan Bees

The Wyoming Experiment Station is receiving a shipment of five Carniolan breeding queens from the famous queen breeder, Jan Strgar, of Yugoslavia. These will be used in a selective breeding project.

# A New Confection—"Honey Kream"

By G. G. Griswold.

THE cut herewith shows a jar (paper) of some of the Honey Butter Spread Confection we placed on the market in a small way here in this vicinity during the early part of the present year. Briefly, we will describe our various steps up to the present time along this sweet line. We have only been in the honey game, so to speak, for a period of some three short years, starting with a swarm that died in the hard winter, through a well-known Madison beekeeper telling us they only required a few pounds of honey to winter. At that time we knew no better and today we know, that is **really know**, but very little about either bees,



"Honey Kream" was first called "Honey Butter Spread Confection" and put up in a paper carton like this.

queens or honey, and the deeper we get into these subjects the less we know.

However, to proceed with our subject, our idea in putting a new article on the market was to have more things to carry in the honey line, so that when we call on the trade and find it supplied with both comb and extracted honey of the various kinds and sizes, we say, "Mr. Grocer, did you ever see our new Honey Butter?" He says "No," and we proceed to have him taste it; we get him to take a few jars on trial, sometimes on consignment and possibly leave a free jar to give out in samples and tell him a few bee stories, and we find many, if not all, people are very much interested in bees and honey. In starting our honey butter on the market we also employed the placard 8x14 inches on stiff cardboard shown on next page.

A few hundred of these placards were of very material help in getting people to eat our products, and quite a lot of people bought a sample jar more out of curiosity than anything else. We have most of the bee journals, but found the subject of honey butter and cream very meagre of information, so we had to go it blindly. Our start was in heating the granulated honey in 60-lb. cans. We naturally got our fingers in the partly melted honey and, if you will pardon us, though of course you do it yourselves, we licked our fingers and, of course, it tasted good to us, and we knew it would taste good to others, so we got a few one-half and pound paper jars like above and started out. There was more or less grain in this granulated honey, so we got to using part extracted, about half and half, and mix the sweet mass up with a paddle and dip it into the jars with a ladle, spoon or dipper. This lasted a few weeks and then we had tanks made with 2-inch faucets that would permit the thick, slow-moving mass to flow freely.

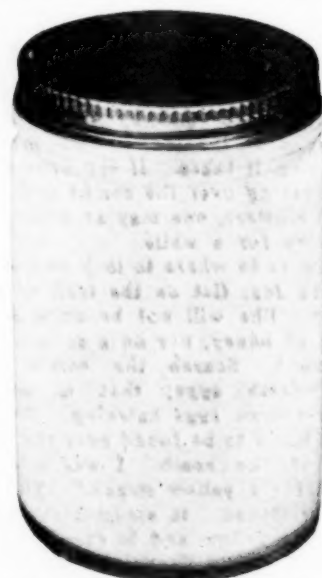
Then one day, while at Conneaut, Ohio, while selling honey in Smith's grocery, a lady came in and said she wanted some of the Griswold honey butter and asked Smith how it was made. Smith says, "There is Griswold, the man who makes it," and, without permitting me to say anything, he says, "Griswold simply gets his mix right and then runs it through that mayonnaise machine, or one like it." This, of course started me to thinking, and so we procured the services of a small mixer and run our mixture through at various temperatures and mixes and have sold quite a lot of honey butter manufactured in this way and many tons more can be put on the market like this. But we quickly found it would not stand up; it was grainy and settled into a more or less hard mass and when put in glass would present a mottled appearance that was not conducive to quick sales.

At this writing we have overcome practically all objections in our own minds and also in the minds of most of our customers and we have to carry about as much honey butter, honey cream in paper and glass as comb and extracted; in all we have some 20 packages and it is rare indeed that we go in a store without leaving honey in some form.

We have been asked many times what we had in our brand of honey butter and cream, and when we told them nothing, they did not believe us and looked so skeptical that we

finally conceded there was something in it besides honey, but did not tell this was simply "muscle" and a little horse sense.

We find the honey business today one of the most neglected industries we have. Prices are not standardized anywhere for any article; beekeepers have no fixed prices and in selling on the Cleveland market we have to sell the same sized jars at different prices in the same market, and we find some slight variations even in the great A. I. Root brands. We bought a man's crop at 7c, good white clover honey; he said he had to have money and had no buyers and knew of no way to get any



"Honey Kream" shows best in a glass jar because of its attractive, creamy look

money out of it except by price cutting. This should be remedied in some way. It's up to us beekeepers to remedy this situation and put honey on its feet and on the market right.

We must have honey on sale in some form in all hotels, restaurants, ice cream parlors and confectionery stores. We always call for honey when we patronize these places and it is amusing to note the different answers we get and the excuses that are given for not having honey on sale.

We must make more honey combinations with other food products in order to create more of a demand for honey. We have got to work to get the public interested in using more honey in place of the thousands of tons of cane sugar, glucose, nucoa nut, margarine, cheap candies, etc.

What we have done in a small way,



marketing a perfectly new article of honey, doing all the pioneering ourselves, can be done nationally and will go quite a ways to dispose of the heavy hangover of the 1925 crop in places. We will be glad to make public any further information desired, either through these columns or by private letter, though our time is getting limited on account of our increasing honey business.

Another thing, very little honey is properly dressed for market. "Pure Honey, John Jones, Mentor, O., 8 oz. net," on a one-color plain label, is not enough in this day of highly colored lithographed, neatly dressed packages of practically everything. Today as never before people are buying with their eyes as much as taste, but nevertheless the goods must back up the eye, when used, or they don't repeat.

It is time that honey rich and pure, heavy in iron health vitamins should be put in its proper place on every table in some form. Many people are eating our Honey Kream who do not care for either comb or extracted honey. We are doing our best along this line—are you?

Madison, Ohio.

(Mr. Griswold has evidently been using a plan similar to that of the makers of "Miel de Chamonix," a white honey of France beaten into a sort of cream. This method produces good results, if the beaten honey is not kept in hot weather.—Editor.)

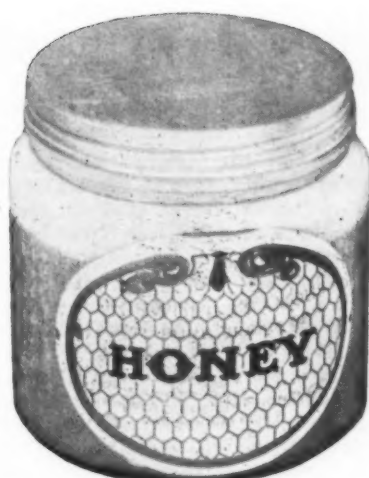
## A Solution of the Marketing Problem—Organize

By Earl C. Reed.

I believe the most imperative problem of the beekeeper is marketing his product at a fair profit. Foulbrood he can and will clean up; there's a way to do it, and other problems of production are likewise met and solved. But after months of toil and planning, and in many cases borrowing money for containers, what is the reward for his labor? A crowded and uncertain market, frequently very low prices, and large carry-overs are the outstanding experiences.

Every man producing something for a hungry world to eat, finds himself in just that position. The price of a manufactured article carries with it the cost of raw material, the cost of labor, and administration, royalties on highly efficient patented machines which speed up production, the cost of selling the article, which in many instances includes extensive advertising programs, overhead, and last but not least, a profit for the firm.

To accomplish this, do the manu-



The first jars were squat and the "kream" tended to separate into layers after a time. In the more perfected product on the opposite page this is avoided.

facturers, separately and each for himself, write the various users quoting diverse prices? Not by a long way; they have an effective organization, national in its scope, and large establishments maintain individual sales organizations besides, and profitable prices are maintained year after year. Did you ever hear of a bumper crop of shoes, clothing or automobiles, with the market overloaded with them, resulting in a sudden slump in prices? Surplusage in manufactured goods is not frequent, because of systematic surveys compiled from past records, and current conditions, which largely control the output.

If a surplus of honey, or even enough to meet normal demand is produced, it has a depressing effect on the market. Why? Because Tom, Dick and Harry write to all the honey buyers in the country, telling

how much honey they have and how much they would like to have for it. Buyers keep for ready reference records of all offerings, and compare them with those of other buyers, and then pay as little as conditions seem to warrant, and you can't blame them. They know how much honey there is, and the beekeeper doesn't know anything about it, because he is not organized.

A buyer wrote me in January asking if I had any honey and what price, and indicating he was in the market for a car of honey. About a week later a neighbor beekeeper brought this buyer to my house. Of course I was surprised to see him. He had my letter in his file of replies, which looked nearly an inch thick. My neighbor quoted him a quarter of a cent less than I did, and it developed that he was out to buy some eight or ten cars of honey, making as much as a cent a pound commission on some cars bought for other firms, more clean profit that the producer made. Supposing the intermountain territory put over the marketing program proposed by John Hendricks, and all the beekeepers to whom this buyer wrote, as a feeler, turned the inquiry over to their marketing association, and he received but one reply and one price, he would not have a bunch of letters to get on the train with and profit by traveling 3,000 miles exploiting beekeepers. Don't hesitate to support that marketing organization.

Wyoming.

## Furnishing Different Flavors

By L. H. Cobb.

One year we had our honey trade built up and our honey gone. It was necessary to buy honey or lose the value of our building up business. While it was easy to buy clover honey, it struck me that we could probably make additional friends if we hunted up a honey differing in flavor, so I ordered a case of raspberry honey from the wild raspberry section. It took, and our old customers were pleased, and we were able to get new customers because of the special honey we sold. We next tried California sage honey, so different in flavor that it again pleased our buyers. Then some of the old-timers from "back east" wanted some buckwheat honey, and we managed to find some for them. While our profit was not great, and we would have made some more profit per pound on clover honey from the nearest supply house, I am convinced that our real profit was greater from these special flavors, helping to make a better market for our own honey.

## LISTEN, MOTHERS!

Save \$\$\$\$\$\$ in buying spreads and butters for your Kiddies' lunch

Satisfy their natural craving for sweets at the same time by using

### Griswold's Pure Honey Butter Spread Confection

Predigested by the bees, gathered and distilled from the nectar of a thousand flowers.

Purest—Sweetest—Best

**GRISWOLD BEELINE HONEY**

Madison, Lake Co., O.

Ads like the above help to sell the product readily

# American Foulbrood—Hutzelman Solution

By E. S. Miller.

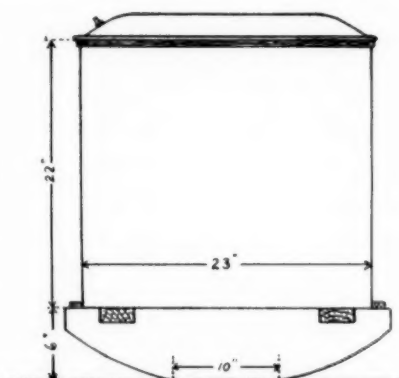
TO ONE who has a considerable number of bees and unexpectedly discovers among his colonies one or more cases of American foulbrood, there at once presents itself a serious and difficult problem. If the beekeeper is of the careless type or ignorant of the correct mode of treatment, it spells, ultimately, his finish as a honey producer. If he is extremely caretaking and is willing to put up a determined and long continued fight, he may finally win. There are so many ways that the germs of foulbrood may be disseminated in a yard that it is almost impossible to know, in many cases, just how the disease becomes scattered. A drop of infected honey, in the grass, or upon one's clothing or shoes, unnoticed by the operator, may be found by some stray bee and become a source of infection. Bees carried into the honey house along with honey may feed outside bees through window screens unless these are made double. Bees shaken from combs may fly into other hives, carrying with them honey laden with disease germs. But probably 90 per cent or more of the infection, in yards run for extracted honey, is transmitted by means of the interchange of combs or by placing wet infected super combs upon healthy colonies.

One may carefully inspect and dispose of every colony showing a single cell of American foulbrood and then extract combs from supposedly healthy colonies, and yet some one colony in which no disease is apparent, may become the source of infection. If a capping knife is used and the combs run through the extractor, all subsequently uncapped and extracted are in danger of becoming infected and unless disinfected, are almost sure to carry disease. It is not a good thing to carry wet combs over winter to be placed on the hives in spring. If a considerable percentage are diseased, all should be sterilized or destroyed. If one has only a few such it is better to burn them or melt them for wax. Treating with Hutzelman solution is, at best, a disagreeable task, and if there are only a few, it doesn't pay. If one has hundreds or thousands of nearly perfect combs, it is then advisable to get a suitable outfit for the purpose. Crooked, stretched or otherwise defective combs should be made into wax if there are a sufficient number to warrant it. Only the best should be saved.

The cost of treatment varies, de-

pending on the number of combs, kind of equipment and the temperature. The statement that they can be treated at a cost of four cents each is, I think, unwarranted. Counting labor, the cost of solution, the interest on the investment and depreciation of equipment, I believe that 12 to 15 cents is nearer the correct figure. Nevertheless, if there is a sufficient number of nearly perfect combs, it is preferable to treat, rather than to destroy them.

The question frequently is asked whether or not the treatment with Hutzelman solution is really effective



Rocking tank for Hutzelman solution

and whether or not any other or cheaper disinfectant is available. In answer to the first I will say that, in our treatment of over 5,000 combs, recurrences have been few, and these we have attributed to overlooked cells of capped honey. The solution will not penetrate the wax caps of honey cells, and if a single one is overlooked, the disease is very apt to reappear. Brood cells, on the contrary, are porous and will be penetrated by the solution. Not all of the above mentioned combs were infected, but since some colonies were diseased, it was deemed safer to treat all super combs as well as all brood combs not in use.

Hutzelman solution is supposed to be made of about equal parts of formalin and ethyl alcohol. Since formalin is a water solution of formaldehyde, and alcohol contains more or less water, it is evident that water necessarily forms a considerable part of the mixture. The reason for using alcohol is that it penetrates the cells much more readily than would water. A dry comb may be kept under water for days without the water entering all the cells, and for this reason, a mere water solution of formalin would not, in my opinion, be effective. Soap solutions

have been tried, but with what success has not yet been fully determined.

The equipment for treating combs may be very simple and inexpensive or it may be more elaborate. A small tank can be made by soldering together 5-gallon cans, but if one's time is of value it is doubtful whether it pays. Some use a steel barrel, which is raised and lowered by means of pulleys, allowing the solution to flow through a hose to and from the tank in which the combs are immersed. We have not used this contrivance, for the reason that it takes more room than we have at our disposal, and furthermore, the loss would be great in case the hose connection should give way or even leak. Our immersion tank is made of heavy galvanized sheet iron, nearly cubical in shape, being 19½ inches wide, 22 inches high and 23 inches long. It is placed on rockers.

In packing the combs they are placed vertically and each alternate comb is inverted. This tank will hold two layers of regular Langstroth size of 20 each, or three layers of shallow extracting combs. It is apparent that where there are only a few hundred to treat, the tank may be made shorter, say half the length, but of the same depth and width, in which case the rocker may be omitted. After weighting the frames down the solution is poured in so as to cover them, and while this is being done the tank is rocked back and forth slowly so as to allow the air to escape and the solution to enter the cells. The combs are then left a couple of days before extracting. If combs contain honey they should be soaked in water and extracted before being placed in the solution. Additional equipment consists of a small extractor which, if used for this purpose, will be rendered unfit for extracting honey. In removing the combs for extracting, much of the solution may be shaken out when one learns the trick. It is done with a sort of side swing, different from shaking bees off a comb. By so doing, dripping will be prevented and much waste avoided. The combs are then extracted and placed in supers which are piled cross-cross in order to dry. A new batch can then be treated the same way, the solution from the extractor being poured back into the tank through a wire screen. It can be used over and over indefinitely, although if it becomes thick with pollen it should be strained. When combs are exposed

to the air the solution soon evaporates and the odor is no longer noticeable. Bees do not seem to object even to the wet combs.

This work should be done in a well ventilated room, as formalin is very volatile, especially in warm weather, and not at all pleasant to breathe. A tank as above described will require about 30 gallons, and it will be necessary from time to time to replenish the solution, as a considerable amount will adhere to the combs. There will also be some waste by evaporation from the tank. Most of this, however, can be avoided by having a tight cover. Unless an extractor is used the waste will be much greater. Thirty gallons of solution at the retail price of \$1.65 amounts to about \$50.00 and the la-

bor is no small item, but even at that it pays to save good combs.

I note that some Southern writers advocate the total destruction of hive, bees and honey whenever a case of foulbrood is discovered. Perhaps such treatment is advisable under conditions as they exist in some parts of the country where American foulbrood has not yet obtained a foothold. But for the commercial producer in infected areas, who has the opportunity and facilities for maintaining a hospital yard, it would be folly to destroy such property. American foulbrood, in this locality, is becoming less and less each year and, in my opinion, it will be only a very few years when it will be entirely eliminated.

Indiana.

## Cutting Corolla Tubes By Honeybees

Apparently the question as to whether or not the honeybee cuts the tubes of flowers too deep for her to reach in the usual manner is no new thing. Prof. A. C. Burrill, who has been giving this subject a good deal of attention, sends us the following note from the proceedings of the Academy of Natural Sciences of Philadelphia for January 15, 1878:

Mr. Thomas Meehan referred to the practice of the humblebee in boring the corolla instead of entering by the mouth, even when there might be no great difficulty in doing so. A few years ago it was not noticed that any flowers were despoiled of their sweets in this extraneous way, but it was now known that the list of plants so treated was very large, and the humblebee in America had already lost considerable if its reputation as an agent in the cross fertilization of flowers. He had carefully watched the honeybee for some years, but could never feel sure that it also bored the corollas in the same way, for though he had often seen them working from the outside, he suspected that they used the holes made by the humblebee. Mr. Ryder, at one of our meetings, had insisted that the honeybee did actually work occasionally in this way, and Mr. Meehan said he was led to go over the subject again, proving Mr. Ryder to be right. Late in the autumn, long after most other flowers were gone, and with no humblebees about, scarlet sages, (*Salvia splendens*), for nearly a week together, received the sole attention of the honeybees, which worked among the flowers in great numbers, in all cases boring the corollas near the base from the outside.

In connection with this fact, he

said that among the scarlet sages were a large number of the pure white variety, but the bees visited them precisely as they did the scarlet, going to either indiscriminately. As bees usually contrive to work on one kind of flower only so long as there were plenty of that one kind, the fact of their working on these two colors at once showed that they did not make use of color only as a guide to the flowers, but that they had intelligence enough to know the *Salvia splendens* as well as we would, by experience, no matter under what color the species might be represented; and the experiments we read of, in which the bees failed to make use of a fresh flower when its corolla was taken away, merely showed that the bee was not acting from an instinctive attraction by color, but had been deceived into the idea that the flower had faded away. Insects had evidently only instinct, but were able to exercise a judgment created by experience. In a recent number of "Nature," he said it was on record that a day moth, a *Macroglossum*, made an attempt to extract honey from the artificial flowers on a lady's bonnet, but it was so well able to profit by experience as not to make the attempt a second time.

He illustrated on the blackboard the peculiar lever-like appendages or false anthers in *Salvia*, and said that these had been looked on as special arrangements for cross fertilization. When a bee entered, it lifted the lever, and forced the true anther on the back of the insect, which thus carried pollen to another flower to be brushed against the stigma on entering. It was clear that, however reasonable this seemed hypothetically, it could have little foundation in fact in these

long-tubed *Salvias*. An insect of the honeybee size could not enter, and a smaller one that could, would not be large enough to reach the stigmas, which were high up at the apex of the arch of the corolla. Only long-tongued moths could extract honey by way of the mouth; but as they thrust only their tongues into the flowers, keeping their bodies outside, the lever-like adaptation to the bodies of insects, as suggested by the prevailing hypothesis, had no force.

## Ornamental and Shade Trees As Honey Producers

On the face of it, the suggestion by Wm. P. Fritz, of Orange, N. J., in the November American Bee Journal, to urge tree planting committees to plant basswood is good. Unfortunately for New Jersey, the idea cannot be considered valuable since no beekeeper in New Jersey ever claimed to have had honey from these trees.

A few years ago I took up this matter with the Chief of the State Department of Conservation and Development, which Department is consulted and gives advice regarding varieties of trees suitable for park, street and roadside planting, and found there could be no common interest.

There are but three trees which promise to be of any value as nectar producers. These are the black locust (*Robinia pseudacacia*), the tulip, sometimes called poplar or tulip poplar, also whitewood (*Liriodendron tulipifera*), and the basswoods or lindens (*Tilia spp.*).

The first of these does not make a good shade tree and, when planted near cultivated fields, the roots creep out into such fields and absorb the moisture to the interference of growing crops.

The second makes a splendid tree but is subject to attacks of the tulip scale (*Euleucanum tulipifera*).

The third makes a splendid shade tree but cannot thrive on paved streets and is attacked by some insect pests and diseases. Also it is doubtful if it has ever produced a noticeable amount of nectar in New Jersey.

For the reasons given it seems doubtful if beekeepers in New Jersey can gain anything by advocating the planting of any nectar-producing tree.

Elmer G. Carr.

(Basswood is a honey yielder in Illinois and we hope it is in many other sections, for it is a fine shade tree and its blossoms are very fragrant.—Editor.)



# Bees In the "Landes" of France

By P. J. Baldensperger.

I LIKE to come back to the Arabic-speaking people, whom I consider to some extent my "compatriots." They are a fine set; their philosophy is sublime. Europeans as a rule love to read about their sagacity, but, as soon as they come in contact with them personally, they call them all kinds of names and look down on the lazy, indolent, quarrelsome, and so on, fellows. I get along with them because I speak their language and because I have lived long with them as a child—the happy days of youth, when everything is poetical, before we arrive at the age when the rush for piasters, francs or dollars seems the principal object in life.

I was strolling this morning along the Arabic sweetmeats market in town. Arabs buy and sell in the open air, and their trays of honey-made cakes tempt, not only the sweet-tooths, but also numerous bees. The Tellian, or black bee of North Africa (*Apis mellifica unicolor* var.), a very angry bee when disturbed about the hives, was loitering on all the sweets, and a small girl in her gay African shawls and petticoats of many colors discreetly dipped her tiny fingers in the sweets between the bees, without in the least fearing the stings, sipping with intent pleasure the honey. Honey calms the worst of tempers, as I could see; mismanagement irritates bees and men as well.

But I'll leave the Tellian bee for the moment. I may tell you more about her in a few weeks, and today will entertain you with a newly discovered bee, at least so I thought when visiting my daughter, Nora, in Pau, the other day. I was invited to visit the beekeepers in the Department "Des Landes," bordering the Gironde near the Bay of Biscay—Atlantic shores. I had the good luck to have as guide Mr. Ives Michaud, who has lived for some time in French Canada and learned there about bees, and is now a flourishing beekeeper in Pau, as well as dealer in beekeeping articles.

The Department "Des Landes," at the end of the Eighteenth Century, was the poorest spot in France and invaded by the sands. N. U. Bremon-tier, a civil engineer, proposed to plant pine trees to stop the sand invasion. The scheme was carried through and now millions of trees cover the marshy, sandy wastes, which have become flourishing forests. The inhabitants extract resinous matter from the trees, and turpentine flows into small pots at the

foot of the trees. The undergrowth is mostly heather, and for hundreds of miles we met nothing but pine forests in the rolling plain, and as far as the eye could reach the last blossoms of heather painted the soil with the flesh-colored flowers. M. Granel, of Lesperons, in the Landes,



Baldensperger is not only a lover of the East, but a life-long beekeeper. He writes with interest of the vagaries of the honeybee.

met us at a town called Morcenx, with his machine, and took us to Mont de Marsan, the capital, where we had a bee meeting, presided by M. de Poyferre. We talked bees, as it becomes beekeepers, and I heard a good many praises about the melliferous qualities of the heather.

The indigenous beekeepers keep their bees in "bournacs"—the curious bell-shaped straw hives of the Landes,—which they put on the sandy soil or on slabs of stone, right in the heather fields. They put bunches of heather on top to shade the hives against the sun, rarely against the snow, which fall scantily, sometimes, in winter. The peasants brimstone these hives in the fall, leaving some for the next season; as the bees are great swarmers, the empty hives are filled again. One special feature is that, the best honey crop being late in the year, sometimes in September, the swarms come out at that late date and fill their "bell hives" again before the end of the honeyflow.

We beekeepers of the older generation remember Mr. Drory, an enthusiastic beekeeper, who, though born in Berlin, was an Englishman, who came back in the seventies of the last century, when frame hives were altogether unknown in those parts of France. Drory came to Bordeaux and began to instruct a few people eager to hear about the new invention, and they started the

"Society of Apiculture de la Gironde," which, as it often happens, lasted as long as one man of independent means and thorough conviction kept the society going. The society was dissolved when Drory left Bordeaux, but the hives he had introduced are still extant to some degree. They resemble very much the Layens hive, which was perhaps a copy. The Drory hive has deep frames, twenty in one row, the hive having no super. The bees of the Landes, a special heather bee, as all bees kept in small skeps or low hives, are great swarmers. They keep their bees as they were first taught, in double hives, which they cover with tiles. They use a skeleton hive, a kind of support to carry empty combs in the swarming season. As the cage is open on all sides, the swarms alight readily on the combs and they have only the trouble of lifting up the combs with the bees to put them into new hives. I was quite delighted with this simple swarming device, though I told them that in spite of my admiring the ingenious idea, I am against swarming. Bees ought not to swarm so intensely, as they told me they have sometimes three to four swarms.

I ought perhaps to tell you that the bee I met here is the smaller heather bee, known in all the northern Germanic region from Luneburg, Oldenburg, towards The Netherlands; in short, all about the heather region it is the heather bee. *Apis mellifica* var *Lehzeni* is the name given to it by Professor von Buttel-Reepen of Oldenburg, in honor of Lehzen, the north German progressive beekeeper. I am quite certain that the black, or German, bee of America, which ought to be called Dutch bee, originated in Holland and was brought over to the States in the Seventeenth Century. However, the heather bee of the Landes behaves just as your American black bee. It runs from the combs, rushes about the inside of the hives when disturbed, and is rather aggressive, this latter character being especially shown during the earlier heather bloom, the "*Erica-cinerea*," or heather bell. There are in fact four kinds of heather in the Landes. The first kind begins to bloom in April, but gives only a little pollen. Though called by some early botanist Mediterranean heather, "*Erica Mediterranea*," it does not occur on the Mediterranean side, but is strictly Atlantic. The second heather is the bell heather, "*Erica cinerea*," the



Drory hives, twenty frames in a row, no super. Note the skeleton hives in lower left corner, for carrying empty combs

"Melloune" of the Landes, which name indicates its honey qualities. It is also known in Scotland and other heather regions. Honey dark, but liquid to begin with. According to Mr. Granel, the "Melloune" blooms in June, and, though sometimes not blooming over ten days, gives lots of honey,—in fact the big crop reaching, in some years, over a hundred pounds per hive. The third heather is the cross-leaved heather, "Erica tetralix," which follows the Melloune, but does not give any honey worth extracting. Then, after an interruption of over a month, comes the autumn heather, known as Calluna, or Erica vulgaris. The honey of this late flower, which blooms in September, is so dense that no extractor can get it out. The honey must be scraped off the combs, cells and all, and warmed to some extent to rid it of the wax particles. Mr. Granel invented a special instrument resembling a bow. The wire cord can only penetrate about one and a half centimeters, because two projecting spurs prevent it from going further, so he can scrape the honey cells just above the foundation, leaving the foundation clean of honey and ready to be used again by the bees for next season.

Mr. Granel took us around to several apiaries before visiting his own. On an average the crop does not exceed forty pounds, but in some specially fruitful years the superless hives have produced over a hundred pounds. In his home apiary, Mr. Granel had one hive giving him 135 kilos of honey, which is above 297 pounds, in a specially good season. This progressive beekeeper has been trying the best of hives—Dadant, Langstroth, Standard, Root. He has the finest apiaries I have seen. The

picture taken of one of his apiaries shows the splendid arrangement, with a group of French virgin queens, all his own, which is a record for a French family. Some are absent. It was rather a cold morning for the shivering virgins showing their bee-like legs a la mode. Some bournacs still appear in the background, but will be transferred to movable frame hives soon.

The beehives invented by Father Langstroth some seventy-five years ago in America may be called the French type of hive; though names differ, the principle is the same, the hives opening on the top and frames separated all around the walls, bottoms and tops, which is the essential feature of the Langstroth hive, no matter the inches or centimeters. One trouble about badly educated beekeepers is that those beginners

start on a given idea and, at the first occasion, change some essential feature in or about the hives, simply because they are not altogether convinced that the first inventor spent years and plenty of thinking to build up his hive. Thus very often we meet, and meet again, frames too tightly stuck into the hive because the freshman thought the predecessor put in his frames too loose, with the result of receiving plenty of bee stings while pulling out the frames. Of course, it is none of his fault, but the "ugly bees." Next he invents a hive without a super, because he thinks a super is so troublesome to take away. Next, he never reads what is going on in the world when others are far ahead, and he sticks to his self-conceit because in a fruitful season he had twenty, thirty or more pounds of honey. Chance, and not observations, has been guiding him. Thus we met beekeepers who with some satisfaction said: "We had in such and such a year so many pounds of honey, and, moreover, three or more swarms per hive. We sold all for so many francs, therefore our system is good." It will take time to teach some at least that young selected queens heading the colony, full-sheeted frames in the hives, ready supers, are three-quarters of the way to success. You can see our young friend, Mr. Yves Michaud, walking between his well-kept hives, with supers, as a "cog gaulois," happy of his calling, just ready to crow. (Here are my hives.) "Voici mes ruches."

We visited other apiaries, till a sudden snow storm, coming with vehemence from far-away Russia, put a stop to our investigations.

Although the principal honeyflow



M. Granel's apiary at Lesperons. Note the bournacs in the background

originates in the heather, still, in some parts, at least, fruit trees abound, as well as many other honey plants. Borage, clover, and the like, give a good foretaste before June, when the first heather honey crop begins. In every country there are good and bad seasons and now and then an extra blooming one. Since the rapid way of locomotion has come about, beekeepers who have an open eye carry their hives to new pastures with great facility. Of course, this means good hives, where bees are snugly kept in for the journey. Especially in a country almost flat it is of no consequence to carry bees miles and miles away from home, and that is what many progressive beekeepers do now.

The Landes, according to my travelling companions, has become one of the richest honey departments in France; so are the neighboring departments of Lot-et-Garonne and some others, where they still talk about your visit to them before the great war. In a specially poor year, the Landes furnishes far above a million pounds of honey. As the honey of this source is very dark, it sells at a lower price than the honey of lighter hue and more aromatic taste. Gingerbread factories, principally in the center of France, buy it readily.

In a comparatively short time I met three different races of bees, namely: the dark heather bee of the Landes, which closely resembles the "Dutch bee," your American black bee, "*Apis mellifica* var *Lehzeni*"; the brown bee of France, as a rule "*Apis mellifica mellifica*," and here in north Africa a variety of the "Madagascar bee," "*Apis mellifica unicolor* (Latreille), which is the Tellian bee (Baldensperger) of all north Africa, except Egypt, the "*Apis mellifica unicolor* var *intermissa* (v. Buttel-Reepen). Now the difference between the three bees is: The brown bee is biggest and easily handled, keeping quiet on the combs, a very agreeable feature to hunt for the queen and shake off the bees without trouble. Second, the heather bee of the Landes, which runs off the comb as soon as disturbed, queens seeming to play at "hide and seek" in every corner of the hive, and slightly more aggressive than the brown bee. Third, the Tellian bee of North Africa, very aggressive, running somewhat, but whose special feature is its plastering over combs, hives, and all within its reach, with propolis.

Is it the influence of small hives alone, or is it the late heather bloom which has created the general excitability of the heather bee, ever

ready to swarm or to move? The beemasters of heather countries are herewith cordially invited to give

their opinion. We always want more light about every feature in beekeeping.

## Some Southwestern Honey Plants

By Frank C. Pellett.

WHEN beginning a study of the honey plants I was led into several errors, by common names. From a certain locality would come a very definite report of honey from a particular plant known to local beekeepers by a very different name from that which it carried in another locality. Knowing a different plant by such a name, it was easy to give credit where it did not belong. It soon became apparent that verification of all such reports are necessary to make sure of the plant with which we are dealing.

### The Greasewood

Greasewood is a very good example of the confusion that prevails in the use of common names of plants. It so happened that the first "greasewood" of which I learned was later identified as chamise, *Adenostoma fasciculatum*. This plant was accordingly included in the book "American Honey Plants" under this name, which seems to be in very common use in some localities. Later visits to the West brought to light the fact that several different shrubs are known as greasewood in different localities and that the name alone is not of much value in determining what particular plant may be meant.

There are two shrubs which are of some importance to the beekeeper which are known by this name, as well as some others which are apparently not bee plants. It is hoped that the pictures shown herewith will enable the beekeeper to know the two which are of especial interest to him.

### Chamise, or Chamiso

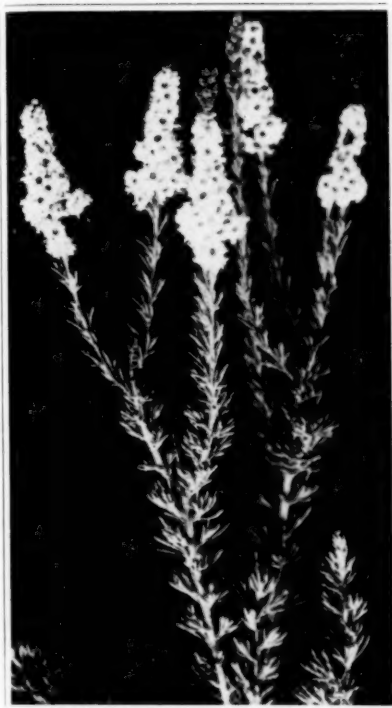
The chamise is a somewhat resinous shrub, which rarely reaches the height of a small tree, common to the coast ranges of California. In most cases it is of small size and grows in rather dense masses on the mountain sides. It is an evergreen and well suited to ornamental planting under favorable climatic conditions. The flowers are small and white, in close terminal bunches. When in bloom this shrub makes a handsome show and the mountainsides where it grows furnish considerable bee pasture. There are large areas where chamise is the most common shrub, and on some mountains little else is to be seen. The illustration gives a good idea of the details of the branches, leaves and flowers.

Beekeepers in southern California visited by the writer did not regard



Blossoms, seed pods and leaves of creosote bush





Chamise in bloom

it as of much value, although stating that the bees work on it to some extent. Farther north, however, a greater value is placed on it. North of San Francisco there are reports of considerable surplus honey from this source, and Coleman stated in the Western Honeybee (May 1921) that the honey is light amber and of good quality. Prof. G. H. Vansell states that in some northern California locations it is of sufficient importance to induce the beekeepers to move apiaries to good chamise areas. The blooming period is usually reported as from May to June, but the writer found it in bloom in March in southern California, in the spring of 1925.

#### Creosote Bush

The creosote bush (*Covillea glutinosa*) is also an evergreen, but of very different appearance. It grows on the driest desert areas from western Texas to southeastern California and north to Utah. Among the beekeepers throughout this region the writer found it called by the name "greasewood." The leaves are covered with a resinous, gummy substance with somewhat the odor of creosote, which accounts for the name. Since there is a greasy appearance, it is not surprising that it is also called greasewood. It is of low spreading habit, somewhat resembling a gooseberry bush in manner of growth. The Mexicans call it "Hediondillo," which means "stinking," a very appropriate name.

In many places the creosote bush is found over wide areas almost to the exclusion of other shrubs, while in other places it is found growing together with yuccas, palo verde, cacti or other plants peculiar to the region. It covers a wider distribution than other southwestern shrubs and may be said to be the most characteristic shrub of the deserts of the Southwest. It is able to stand long periods of extreme drouth, and I found it blooming in February in places where there had been less than four inches of rain during the entire year just past.

In northern Mexico the creosote bush is much used in domestic medicine. An extract secured by boiling the leaves is used as an external remedy for rheumatism and is also applied to cuts and bruises as an antiseptic.

Under ordinary desert conditions the plant attains a height of three or four feet, but with favorable supply of moisture it grows to seven or eight feet.

As a bee plant its greatest value seems to be as a means of stimulation of brood rearing, although it is reported as occasionally yielding surplus. Its blooming, as with most desert shrubs, is greatly influenced by moisture conditions. In seasons when moisture is available it may bloom at different times. Usually it blooms profusely in early summer. The bright yellow blossoms are about half an inch in diameter, as shown in the picture, which also shows seed pods and leaves.

J. W. Powell reports that in the vicinity of Mesilla Park, New Mexico, he occasionally gets a small surplus, from creosote bush, of a mild, light amber honey. The bees work it freely early in the morning and find it valuable for pollen also, according to his report.

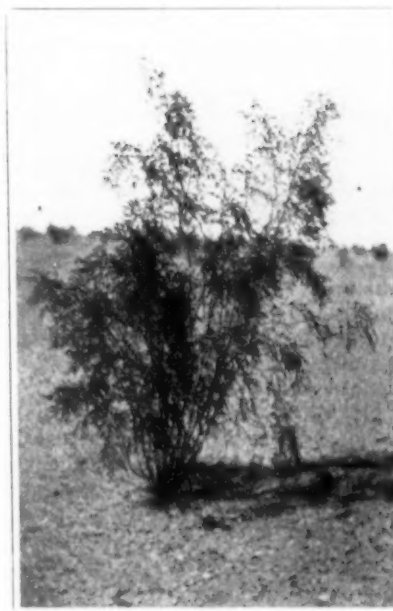
#### The Color of Honey As Influenced By Age

In the year 1882 I commenced to put up samples of pure white extracted honey in bottles with ground glass stoppers, and also in bottles with loose corks.

About January, 1926, I prepared ten samples of this honey and labeled it with copper labels, so as to resist time, and sent it to the University of Wisconsin, College of Agriculture, in care of Mr. H. F. Wilson.

I am inclosing a letter from Mr. Wilson bearing date of February 8, 1926.

If you please to publish this letter you may do so, and if any of my



Creosote bush in Arizona desert

beekeeping friends happen to visit the University of Wisconsin they might call on Professor Wilson, and I am sure he will be pleased to show you these samples.

R. A. Morgan.

The answer of Professor Wilson follows:

Dear Sir: I have your letter, also the samples of honey, and I express my most sincere appreciation for sending these to us. I was particularly interested in the fact that the honey had turned black. I gather from your letter that this honey was originally white and has, through age, become darkened. I also notice that the flavor of the honey has been completely lost and it is more like molasses.

It is extremely fortunate that we received these samples at this time, as we are making a study of honey, what it contains, and causes of fermentation and results of decomposition. So far as I know, this is the most valuable collection of honey in existence, because of its age, and while I do not wish to appear greedy, I hope that when you have finished with other samples that you may have you will send them to us. I am going to place all of these samples in fireproof vaults, rather than in the museum, as they are too valuable to take any chance of their being lost by fire. I am going to advertise the fact that we have them and try to accumulate others from various sections of the country. We are also going to add a sample each year, to make the collection more complete. This is a most excellent contribution to beekeeping and I will give a proper notice of it in our Journal.

H. F. Wilson, Custodian,  
Madison Wisconsin.

(We already knew that honey darkens with age and loses some or most of its essential oil. We had preserved, in glass, a sample of white clover honey of 1875. It was on an upper shelf in a closet and was forgotten till about ten years ago, when it appeared so awfully dark that we doubted it being the same as when put away. This sample has been mislaid.—Editor.)

# Personal Recollections of the Editor

National Beekeepers' Association — No. 2

THE reader will remember that, in my previous article on this subject, I wrote of the organization of the "National Beekeepers' Union" at the suggestion of James Heddon, and with him as the first president. To show the activity that it caused when it was first organized, it is only necessary to state that it was mentioned thirty-two times, in the American Bee Journal, from June 17 of that year to December 31. The American Bee Journal was then published weekly.

The Union's object was "to promote the interests of beekeepers and defend their rights." There was no meeting at first, but just a concentration of action by joining and sending \$1.00 per member, yearly, to Editor Newman. An election by correspondence took place which elected Newman "manager, secretary and treasurer." This was published in the August 5 issue of the American Bee Journal for 1885.

This organization was mentioned favorably at the North American meeting, and in 1886 a meeting of its members was held on the third day of the North American Convention, to hear the report of its manager and approve it.

The principal aim of the "National Beekeepers' Union" was to take the defense of beekeepers wherever necessary and secure court decisions in their favor. It must be borne in mind that, at that time, many horticulturists and fruit growers were of the opinion that bees were injurious to both flowers and fruits. So a number of lawsuits were tried on the subject of whether bees were or not "a nuisance." One of the most important decisions secured by the "Beekeepers' Union" was that of the Supreme Court of Arkansas, on June 22, 1889, that "Neither the keeping, owning or raising of bees is in itself a nuisance. Bees may become a nuisance in a city, but whether they are so or not is a question to be judicially determined in each case." This was a denial of the right of the city of Arkadelphia, Arkansas, to pass an ordinance declaring bees a nuisance and ordering them removed from the city within thirty days.

At the 1890 meeting of the North American, then called "International," Mr. Newman, manager of the Beekeepers' Union, was called upon for a report. His financial statement, published in the American Bee Journal for December 27,

1890, showed a balance of \$621.00 in the treasury.

Although quite a number of beekeepers refused to join the Beekeepers' Union, under the plea that one could always get along with one's neighbors and that those court decisions were useless, it must be recognized that such decisions as that of the Supreme Court of Arkansas were of great benefit to the beekeepers.

The first hint of the desirability of uniting the two associations was made by J. W. Tefft, of Buffalo, N. Y., on page 326 of March, 1891, of the American Bee Journal. In Gleanings of that year, N. E. France objected, saying the two associations had different purposes and that the Union did not need to meet, to elect its officers and carry on its business.

The Union kept the same officers until 1893, when it elected R. L. Taylor president in place of James Heddon, with the same manager, Thomas G. Newman.

In 1896, after having sold the American Bee Journal to George W. York, Thomas G. Newman moved to San Diego, California, probably for reasons of health. The idea of consolidating the two associations became more insistent and numerous articles were written on that subject, especially since Mr. Newman was no longer centrally located.

In the November 19, 1896, number of the American Bee Journal, page 742, Thomas G. Newman wrote a long article criticizing the intended constitution for the two amalgamated associations which had been proposed at the Lincoln meeting, and suggested changes in it. A lively discussion took place between him and Mr. George W. York, who was then president of the North American. The amalgamated association was to be called "United States Beekeepers' Union." There was a strong sentiment in favor of prosecuting adulterators of honey, who were then numerous, for corn syrup, or commercial glucose, was cheap and handy and there was as yet no pure food law in the United States.

As Mr. Newman held off, the United States Beekeepers' Union, organized out of the North American Society, proceeded to elect officers, which actually created two similar associations side by side, both by the name of "Beekeepers' Union." The officers elected were: President, George W. York; secretary, Dr. A. B. Mason; general man-

ager, Eugene Secor; E. R. Root, E. T. Abbott, C. C. Miller, W. Z. Hutchinson, E. Whitcomb and C. P. Dadant, directors.

The first meeting of the reorganized North American, under the name of United States Beekeepers' Union, was held at Buffalo, August 24-26, 1897. At that meeting came a proposal from Mr. Newman that if they amended the constitution to suit him, he might be able to secure the approval of his members to the amalgamation. His letter was simply "ordered printed in the proceedings." It was. Then a committee was appointed to try to effect an amalgamation.

It is to be noted that two men who were officers of the new "United States Beekeepers' Union" were also officers of the old Union: Dr. C. C. Miller and Eugene Secor. A. I. Root was one of the officers of the old Union, while his son, E. R. Root, was an officer of the new one. A queer condition of affairs.

The National Convention that year was held at Omaha, September 13-15, 1898. Meanwhile, Newman, with the old Union, was still working for the good of the beekeepers, as witness several suits won. Secor also reported considerable action to help beekeepers.

In January, 1899, some amendments were put to vote and the name of the association was again changed to "United States Beekeepers' Association." All the officers were re-elected.

In the National Beekeepers' Union the election of officers resulted in the following: President, G. M. Doolittle; vice-presidents, C. C. Miller, A. I. Root, Eugene Secor, C. P. Dadant and J. M. Hambaugh, with Thomas G. Newman still manager, but the latter announced that this would be his last year in service.

The proposed retiring of Newman was the signal for final active steps for amalgamation. More or less complaint had been expressed of his management; his health was poor, he was too far from the center. So, Doolittle, president of the National Union, proposed a coming together. A letter from Thomas G. Newman, at the meeting at Philadelphia, September 5-7, 1899, brought action, and a new constitution was proposed to be voted upon by the members at the next election.

Most of the work, by this time, was concentrated upon efforts to secure a United States pure food

law and the prosecution of adulterators, as may be seen by the reports of Manager Secor.

On January 25, 1900, the American Bee Journal published the last, or fifteenth, annual report of Manager Newman, in which he recounted the work of his association and laid before his members the proposal for an amalgamation, with the proposed new constitution. He had successfully handled scores of cases of lawsuits concerning bees.

On February 15, 1900, the American Bee Journal gave the report of the two managers showing that the vote on both sides had been practically unanimous in favor of amalgamation. The association was henceforth to be called "National Beekeepers' Association." If my readers can remember all the names which were adopted, one after another, they are ahead of me. Neither are we through with it.

Something over 500 members were thus in one body. The new officers were: President, E. R. Root; vice-president, G. M. Doolittle; secretary, Dr. A. B. Mason; general manager, Eugene Secor; directors, E. Whitcomb, W. Z. Hutchinson, A. I. Root, J. M. Hambaugh, Dr. C. C. Miller, C. P. Dadant, Thomas G. Newman, G. M. Doolittle, W. F. Marks, E. R. Root, P. H. Elwood and E. T. Abbott. As will be noticed, the board of directors, originally six, had been increased to twelve.

During that year a World's Congress was held in Paris and I was named as delegate.

The 1900 meeting was held at Chicago, August 28-30, 1900. It was similar to all such meetings, discussions of beekeepers' interests, etc. Shall I give a synopsis of its program? Here it is: Song, Dr. C. C. Miller; "How to Sell Honey," S. A. Niver; "Keeping Bees in a City," L. Kreutzinger; president's address, E. R. Root; "Queen-Rearing by the Doolittle Method," Mrs. H. G. Acklin; "Beekeepers' Rights," H. F. Moore; "Trials of the Commission Man," R. A. Burnett; "Breeding Long-Tongue Bees," J. M. Rankin; "Beekeepers I Have Met," E. R. Root; "Various Forms of Disease," Dr. W. R. Howard; report of General Manager Eugene Secor; "Pure Food Legislation," E. T. Abbott; "Chemistry of Honey and Detection of Adulteration," Thomas W. Cowan; "How to Ship Honey," George W. York; "Co-operation Among Beekeepers," R. C. Aiken; "A Trip Through Wisconsin and Minnesota," W. Z. Hutchinson; regular business. The writer of this was in Paris at the time, attending the World's Congress.

The 1901 meeting was at Buffalo. W. Z. Hutchinson was elected president, the other offices remaining about as before. In December, Eugene Secor published a list of the members, numbering about 900. The Utter lawsuit was the event of that year. Two brothers, residing in New York State, one of whom was a beekeeper and the other a peach grower, had a lawsuit, the peach grower suing the other for damage done to his peaches by the bees of his brother. He won. Then the National took hold of the matter and appealed from the decision. It won. A number of authorities were called on both sides; the bees were proved innocent of "injury to sound fruit." An account of this lawsuit may be found on pages 22-3 of the American Bee Journal for January 9, 1902.

In the course of the year 1902, Secor resigned as general manager. An imbroglio took place in which E. T. Abbott declared himself elected in his stead and demanded the books and the cash. But Secor was prevailed upon to retain the office until the end of the season, when a vote of the membership elected N. E. France as general manager. I have a lot of correspondence from that time, which would make interesting

reading if it would be of any value.

The balance left in the treasury at the end of 1902 was \$803.72.

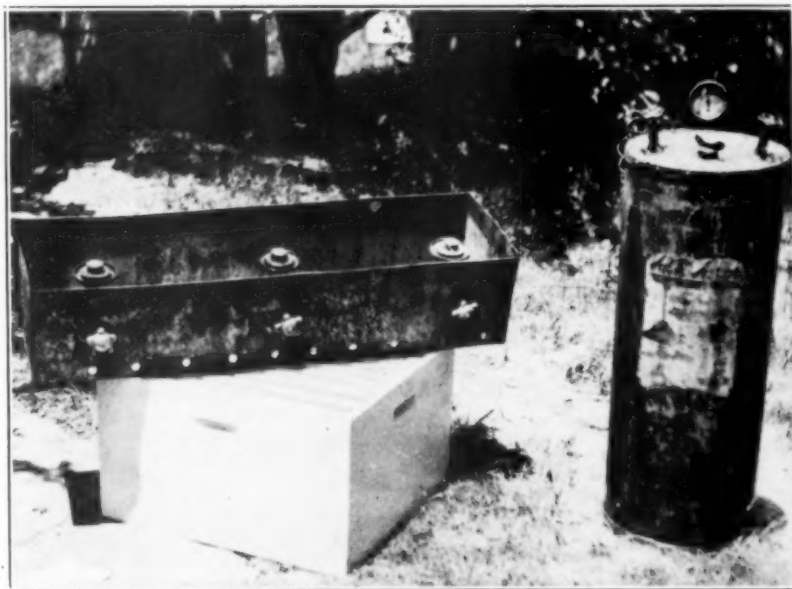
The 1902 convention was held at Denver, September 3-5. The officers elected for 1903 were: President, W. Z. Hutchinson; vice-president, James U. Harris; secretary, George W. York. The board of directors remained the same. We might stop here long enough to state that the former general manager, Thomas G. Newman, died on March 10, 1903.

The National Association having passed the 1,000 mark, Mr. H. J. Moore, at the Chicago Northwestern of December 3-4, 1902, raised the cry, "Let us get 10,000 members for the National." The outlook was good for such a goal. It increased to over 1600 during the year.

The 1903 National Convention was held at Los Angeles, August 18-20, many of the eastern beekeepers going there in a special car and having a good time en route. At that meeting a new constitution was adopted, after having been voted upon by mail.

But I see that I cannot finish the second article, which should carry us to 1910, in this number. Will you have the patience to read an extra one?

## Quick Heat For Capping Melter



The above heating device is used by C. S. Engle, at Sioux City, Iowa, under his capping melter at the out-apiaries. It is a pressure gasoline stove, a small pipe feeding the gas to the burners from the pressure tank.

There is no need to wait for heat, as this outfit steams things up in short order and it is only a wait of a few minutes until the melter is ready and work can begin for the day. It is clean and easily carried, a decided improvement on the old oil stove days.



# THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

## TREATING FOULBROOD IN BOX HIVES

In my inspection work I find a great many colonies with very crooked combs that have been that way for many years, and it is up-hill work to tell much about their condition except by cutting the combs out. I have one party that has forty-two colonies in that condition. I found some brood disease of both kinds, so far not much, but that is enough. He wants me to transfer his bees on full sheets of foundation and requeen them all. Of course they will have to be treated for foulbrood. Now I would like to know what time in the season would be best to do this, and would you treat just as a box hive and smoke and draw them up into another hive? It is a pretty big job for me, but I think I can do it. I have done some of this work, but on a smaller scale. Please inform me of your opinion.

ILLINOIS.

Answer.—Colonies that have foulbrood (American foulbrood) cannot be safely transferred at this time, except by simply driving the bees and hiving them on foundation, either melting or rendering the combs into wax. I would burn up all the combs containing brood and render the others. It must be done so that no bees will be able to get to the combs or the honey. The best time to transfer such colonies is during the honey crop. Requeen them.

You must have assurance that the owner will take care of them afterwards, for if he does not do it he had better have no bees at all left in his possession.

European foulbrood can usually be cured by making the hive queenless, either letting them rear another or replacing her at the end of a week or ten days. The queen cells that they will rear must be destroyed, if a queen is given them.

## SURPLUS HONEY FROM SWARMS

1. I have thirty-nine swarms of bees and they have all swarmed once, most of them the last of May. The young swarms are all built down and have five to six frames of brood, but I cannot get them to make any honey. I use the Baldwin hive. We put a brood frame in the brood chamber with pound boxes in. When they are half filled we raise to upper story, but cannot get them to come inside frames. Do you think they have too much brood to feed and care for? Could that be the reason they are not making any honey? What do you think is the reason? I am feeding sugar, mixing it thin, they seem to work it better.

2. What is the best to use when you smoke your honey before you case it?

3. Will brown sugar make good honey?

MISSOURI.

Answers.—1. The swarming of your bees is one reason why they do not make any surplus now. They cannot both swarm and make surplus, except in extraordinary seasons, and this is not a very good one. Our bees have not swarmed, and yet we are not getting any honey. Rain, cool weather, no clover, or very little of it, are good reasons for their failure to get honey in any large amount. This is June 18.

2. Sulphur or tetrachloride of carbon are both good to kill the moths in comb honey. Usually, however, there are no moths, only eggs. So you must use the

smoke twice, about three weeks apart. Tetrachloride or bi-sulphide are explosive, so you must not bring any light near. Just put about a tablespoonful on a rag and place it at the top of the pile and close carefully until it is all evaporated. Sulphur may be used in the way the druggists sell it to disinfect a room. Enough to kill the flies in the room will be sufficient, if used twice. You may also put it under the pile of hives, or supers. But you must leave enough space so the heat of the burning sulphur will not melt the combs.

3. Brown sugar is just brown sugar and will not make honey any more than molasses will. The bees do not make it any better by taking it and putting it in the cells.

## HISTORY OF A. B. J.—SHIPPING HONEY

1. Give a brief history of the American Bee Journal, time it was first published, who by, editors at different times, etc., up to the time the Dadants owned it.

2. In your experience in selling carlots of honey, will a large car of 40,000 to 60,000 pounds sell as readily as 30,000 to 35,000-pound cars?

3. Can honey in glass and five- and ten-pound pails be shipped in the same car with the large 120-pound cases, and also comb honey, and take the same rate of \$1.35 from intermountain territory?

4. Do you ship foundation in extremely cold weather?

WYOMING.

Answers.—1. The American Bee Journal was first published in Philadelphia, by A. M. Spangler & Co., with Samuel Wagner as its editor. This was in 1861. As the Civil War was then going on, its publication was suspended until July 1866, when the second volume was published in Washington, by Samuel Wagner himself. In January 1867, the "American Bee Gazette" was transferred to the American Bee Journal and the paper called "The American Bee Journal and Gazette" until July 1867, when it again assumed its original name. In February 1872, Samuel Wagner died, and the management of the magazine was temporarily assumed by his son, George S. Wagner. In January 1873, Mr. W. F. Clarke, of Guelph, Ontario, bought the magazine and established it in Chicago. In 1874, he took Mrs. E. S. Tupper as co-editor and Thomas G. Newman as manager. For a little while it was published at Cedar Rapids. But as Mr. Clarke had his home in Canada, the magazine was finally transferred entirely to Thomas G. Newman, who published it at Chicago until 1892, when he took George W. York as assistant editor, and finally sold the magazine to him. The American Bee Journal was published weekly from January 1881 till July 1907, when it again assumed the monthly form.

Mr. York continued as editor and proprietor until May 1912, when the Dadants undertook its publication. It has therefore been in our hands for over fourteen years and its subscription list has trebled.

2. As we have never sold much honey in carloads, we are unable to say whether a large carload will sell as readily as a smaller one. The probability would be in favor of the smaller car, yet some dealers

may be able and willing to handle a large carload.

3. Regarding the rate on honey put up in different shapes, we get the following information from the Chicago, Burlington and Quincy Railroad, at Keokuk.

"The commodity rate of \$1.35 from Powell, Wyoming, to Keokuk applies on honey, minimum 30,000 pounds. The tariff does not specify what kind of honey or how it should be packed. Rate will apply to strained or comb honey, in glass or tin, packed in boxes or barrels."

Different tariffs may have different regulations. Better consult your railroad agent.

4. We cannot ship foundation in extremely cold weather unless it is in refrigerator cars that may be kept warm. So this would not apply to less-than-car-load shipments. If foundation is handled when it is very cold, it will break like glass. We remember of one lot being shipped back to us that had been handled roughly in cold weather, and, although the sheets looked perfect, they would fall to pieces whenever handled.

## PARALYTIC BEES

There are black, slick bees among the good bees. They have no hair on their heads or bodies. I thought it probably was a fever caused from crowded brood chambers.

I have tried all sorts of swarm controls, but they swarm anyway. The one hive I ask about has sealed honey, but the colony is getting weaker, for the bees die as fast as they try to leave the hive. The colony is fully developed, but the bees cannot fly.

ARKANSAS.

Answer.—You will find, on page 281 of the June number of the American Bee Journal, instructions for the prevention of swarming. Your eight-frame hives are probably the principal cause of the issue of so many swarms, but perhaps also your bees do not have enough ventilation and shade.

As for the sickly bees and the hairless bees, I am compelled to say that our knowledge, thus far, of the diseases of the adult bees, is very limited.

Paralysis, May disease, Nosema apis, and a number of other names have been given to the diseases of adult bees. But we have to acknowledge that we do not know yet just what they are, although they appear quite frequently. Usually these troubles appear shortly after winter and disappear during the summer. I do not believe that they are catching, but simply endemic and brought on by causes that we have not yet positively established.

I do not think you will lose many bees by these troubles. As to the loss of swarms, the only remedy that I can see is to use larger hives and the methods recommended by me in the June number.

## QUANTITY INCREASE

We would like to know the best up-to-date plan for increasing say 10 swarms this season as much as possible without regard to securing any surplus honey, in fact would not object to doing a little feeding between this and the honeyflow from basswood, which comes about July 5. Bees now in fairly good condition, but do not get much clover, hence no object in letting present stock lay around unoccupied until basswood flow.

MINNESOTA.

Answer.—Unless you buy your queens ready to introduce and do it at once, it will be out of the question to make divisions that will be strong enough to harvest much honey between this time and July 5, or about a month. Even with queens

ready to lay, you will just begin to get field workers in a month.

With plenty of queens and plenty of comb foundation or better still, with combs already built, you can make increase out of about any two frames of brood and bees to cover them, provided the season is favorable. But you must make sure that you get enough bees with each division, for bees are prone to return to the home that contains the old queen, after they have had a flight or two. So you must close up the hives in which you put the divisions, for 24 to 48 hours. We usually place them in the cellar for that length of time. If you introduce queens at once, the bees will be better satisfied with their new quarters. When we make increase which we desire to be strong at once, we usually take several combs of brood from one hive, then put this division on the stand of another hive. It makes a very good swarm at once, but is probably too slow for you. Make your divisions, give them queens and combs or foundation, then watch them from week to week and help the needy ones as may be required. It takes good beekeeping to succeed in making much increase.

#### KEEPING HONEY FOR CHUNK HONEY

1. I intend to run most of my colonies this year for chunk comb honey and ship in 10-pound pails by parcel post either in September or October this fall. Shall I cut the honey from the frames as soon as it is nicely capped and put it in the pails and store it until I am ready to ship, or shall I stack up the hive bodies of honey and fumigate them and leave them that way until shipping time? I thought perhaps it might turn to sugar quicker if I have it packed away in the pails. On the other hand, the way I store the honey will make quite a difference in the amount of hive bodies I will have to have.

2. I understand the usual way to pack the pails is to fill them with chunk honey and pour in enough extracted honey to fill up all air space. I have no extractor. Would it be just as well to strain some? I suppose it should be fumigated, either way I do.

NEBRASKA.

Answers.—1. It will probably be better to hold the honey, in combs, until you are ready to ship it. You do not need to have hives to hold it when it is off the colonies. Any box made with proper rabbets at proper distance will do to keep the honey, provided it is enclosed so neither dust nor mice can get in. Such boxes would not be very expensive and would be useful every season. It is important that the honey be kept in a warm, dry place; an attic is good.

2. Honey in the comb does not granulate easily unless it is from alfalfa. Keeping it warm will prevent granulation. But the extracted honey that you will use with it must be heated to 140 degrees in order that it may not granulate. And besides, any good beekeeper will tell you that you cannot afford to do without an extractor. You might as well expect a gardener to do without a spade. It will pay you to have an extractor, even if you keep only a half dozen colonies. Don't buy an expensive one.

#### INDUCING WORK IN SECTION SUPERS

I am having trouble with my bees not going to work in the comb honey supers. I have two hundred and fifty colonies and very few are working in the supers. Those that are, are working in two to four supers and are not any stronger than those that are not. I have gone into the homesteads and find every frame full of honey and not as much brood in the eight frames as there should be in one; it is all sealed brood at that. If they keep this up, in ten days

there will be no brood at all. I tried in a few hives scraping the caps off and messing up their honey. But they just repair the damage and take life easy.

Would you suggest that they should be requeened from those that are industrious? If you can suggest a remedy that will get me a honey crop I will certainly appreciate it.

COLORADO.

Answer.—It is very difficult to diagnose your case, as you do not say whether the colonies that are working in the supers began breeding earlier in the season or had more honey to breed upon early, than the others. Very probably it is a case of bees rearing brood upon the crop instead of for the crop, as our friend Demuth so happily puts it.

However, there are breeds that are more likely to scatter their crop about than others. When they keep everything too close, it turns out about as you say. I suppose you have 8-frame hives and I hope you will change to the 10-frame, or put on two stories to breed in spring, as Dr. Miller used to do.

If you are running for extracted honey you could readily induce them to spread, by putting some of the brood in the upper story. Not being acquainted with your climate, I do not know whether it would pay you to try to put a brood story on top of the supers for a few days with some of the brood in it, removing that after they get well started in the supers.

By all means breed your queens from the colonies to give you the most surplus, unless they are hybrids, because hybrids do not have fixed traits. Better breed from the pure stocks.

#### TRANSFERRING FROM BOXES

I have bought some colonies of bees in box hives and want to transfer to modern hives and requeen. Would it be best to transfer immediately on getting them? Would it be better to wait a few weeks before putting in new queen?

I have instructions for transferring in Dadant's Bee Primer. Would it not be O. K. to transfer the worker comb and brood to an extra hive body and place over the colony in this new hive with frames and full sheets of foundation? With queen excluder between? I have never seen the inside of a box hive of bees, but I imagine I would rather get the bees onto straight foundation as soon as possible and discard their old comb.

ILLINOIS.

Answer.—You can transfer bees at this time, if the combs are not too much loaded with honey. As a rule, we prefer to do the transferring in May, during fruit bloom, because at that time, there is the least amount of honey in the combs.

Otherwise, transferring may be done at any time, if you make sure that robber bees will not annoy. At this time, a good way is to drive the bees and queen and put them in a new hive, with a queen excluder on top; then arrange the old hive on top so that the bees will be able to take care of the brood. But fix it so that there is no way of getting out of the old hive except through the new hive.

The queen may be changed at any time, but I would prefer to wait until they are well established in their new home. Three weeks after transferring, the brood will be all hatched out of the combs, if the queen is confined below and you may remove the old hive and do as you please with its combs.

Of course I would use comb foundation in all frames that did not contain any combs.

#### ADDING FIELD BEES TO WEAK COLONIES

I have a hive that was never given a sufficient number of brood frames. The swarm has built comb in the empty side till it is full of comb, but they built onto the cover, so it is hard to super them.

As the colony was strong in bees I moved it about seven days ago and put a weak colony on the old stand, throwing all the field bees in to the weaker colony. I would like to know if the old colony will build up so I can repeat this on another weak colony in about 27 or 30 days. I am not supering it.

IOWA.

Answer.—Yes, it is quite likely that the strong colony will have enough bees hatched within 3 weeks of the first moving to furnish a fresh supply of field bees. But you must make sure that it has enough honey, at the end of that time, because, if there is a shortage of crop, while it has a limited number of field workers, it may suffer.

When you move a colony to deprive it of its field workers, the result is that many of its young bees become field workers earlier than the normal time; they appear to realize their condition and go to work in the field more promptly.

We have often resorted to the method you indicate, to help small divisions, at the time when we gave them queens. It is a very good way to make increase, but of course, shortens the honey crop, as we might expect.

#### THE BEHAVIOR OF BEES

Is robbing likely to be the worst or most likely to occur when queens are not laying much and stores are getting low? Langstroth says those colonies which are the strongest and the richest in stores are the worst robbers. Probably temper and activity have much to do with this.

Answer.—Of course the strongest stocks will be the most successful robbers, but I do not believe that it makes much difference whether a colony is short or rich, in its robbing activity. When there is no honey in the field, any colony will rob that is induced to it by circumstances. After they learn it, they become active robbers, always on the lookout for a chance. In times of crop they soon forget it. When there is a chance to rob, when they find it out, they roam all over the apiary and all over the vicinity. At such times you will see them around a foundation shop or honey house, intent upon plunder.

An ounce of prevention is worth a pound of cure.

#### HONEY FROM BEES ON SHARES

I am running a few colonies of bees on shares and am wanting some information on the matter.

It is my understanding that I am to do all the work, for which I am to receive half the honey and half of increase. What I want to know is, does the increase become my property at once, or not until fall? In the first case I would be entitled to all the honey from said half of increase; in the latter, one half of honey. Which is customary?

COLORADO.

Answer.—We have always figured that half of the increase was due at the end of the season. But it may be done the other way. However, there is more danger for misunderstanding if the increase is to be divided at once, as some swarms will doubtless yield much more honey than others. In this way one man might get much more than half of the crop, if he happens to get the better swarms.

An even division of the crop is much more fair and satisfactory.

## A Swarm of Honey Jokes

By Dwight Hawley.

SOME day the bee and honey jokes of the nation may be collected and bound in cloth—they may be now, but we have not heard of it.

Perhaps one of the best known honey jokes is the one that starts, as so many do, with the traveling man as the central figure. At a certain hotel in his territory he had always been pleased to find upon the table an excellent grade of honey. Upon one trip he took his wife along with him, but when the couple reached the dining room, for the first time in his experience there was no honey upon the table. Calling the waitress to him, he inquired:

"What's become of my honey?"

The waitress looked puzzled and scratched her head and then, smiling knowingly, replied:

"Oh, you mean that little black-haired one. She don't work here any more."

Among other favorites are those relating to the bewilderment of children when they hear the Biblical reference to the land of "milk and honey."

The Sunday school teacher had been reading about Canaan, the "land flowing with milk and honey."

"Now," she said to the class, "what do you think a land flowing with milk and honey would be like?"

"Please, teacher," was the instant reply, "sticky!"

Another is about the curious child:  
"Ma, do cows and bees go to  
heaven?"

"Mercy, child, what a question! Why?"

"Cause if they don't, the milk and honey the preacher said was up there must be all canned stuff."—(Truthseeker.)

From far-off London comes this one:

The school visitor was asking the class a few questions. "Now how do bees dispose of their honey?" he inquired.

"They cell it," announced the clever boy of the class.

The signs of beekeepers often afford amusement, as:

"For Sale—Honey, by the producer," says a signboard.

We've always heard that bees are intelligent, but this is the first we knew they were going into business for themselves.

J. W. W., dazzled by this sign down in New Hampshire, is figuring on the upkeep of one: "Bee's Honey for Sale Here."

The pretended misunderstanding of the capacity of a single bee is a favorite idea with humorists. For

instance, there is a letter declared to have been received by a seed firm in Boston. The customer ordered, among other things, one bee with hive complete and side and back combs for the honey.

A household hint writer in the Milwaukee Journal declares that "honey may be used for sweetening almost anything but a traffic cop."

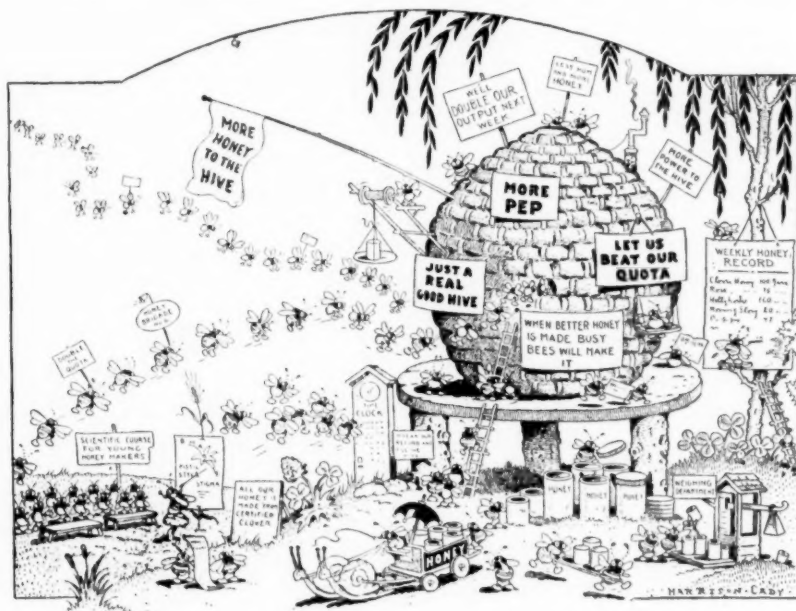
In connection with the latest use

### "The Highbrow Bee"

How doth the little busy bee  
Improve each generation  
With pedigree and family tree  
And rank and social station.

## “Why, Certainly”

If flies are flies because they fly,  
And ties are ties because they tie,  
Then are fleas fleas because they flea,  
And are bees bees because they be?



By courtesy of "Life." Copyright by Life Publishing Company.  
Drawing by Harrison Cady

of honey for automobiles, a newspaper columnist in Chicago finds a double meaning:

## "Honey Better Than Alcohol for Motor"

And you can find one  
On any corner  
Along Sheridan Road.

In the field of comic verse there is a big field for the rhymester, as these examples will show:

## "Bees Feasting on Mash, Battle with Dry Agents

How doth the little busy bee improve each opportunity. He makes a dash for likker mash and stings the whole community.

## "Bee Stings Cure Skin Malady"

How doth the little stinging bee  
Improve the weak and ill!  
And then the doctor comes along  
And stings 'em with a bill.

### "A Tale with a Point"

You never heard the bee complain,  
Nor hear it weep or wail:  
But if it wish it can unfold  
A very painful tail.

## West Indian Propolis

By E. H. Babbitt.

As a note to my article on Propolis in the American Bee Journal last October, page 475, it may interest the readers of the Journal to know that I found the propolis in the Leeward Islands, where I spent last winter, something quite different from what we get in the temperate zone. It has no perceptible odor when handled, and when burned is not fragrant, but gives an odor something like that of burning sugar. It differs also somewhat from ours in plasticity, and so far as I have been able to test it, is not brittle when cold.

One of the beekeepers I met in the islands thinks the bees get it, or some of it, from banana leaves. They are seen on them a good deal, apparently gathering something, and propolis is a reasonable explanation.

**Connecticut.**



## Carelessness Fosters Foulbrood

By W. Parker Smith.

### Bee Notes

"It's an ill wind that blows no-whar," as the old darkey said. If because of our carelessness, a state bee inspector burns a lot of our equipment that is reeking with disease, we may be receiving a blessing in disguise. The large number of small beekeepers who are still hoping that their bees will board themselves and at the same time supply their masters with many pounds of delicious honey, are fast disappearing, and those that "stick" are learning that beekeeping requires close attention and good, hard thinking if there is to be a crop with good profit.

During the past three years American foulbrood has wiped out many colonies of bees where this common and very contagious disease has never been known before and, had "our folks" been particular in going over their colonies more frequently and more carefully, many bees and dollars might have been saved.

Sheer neglect is the small beekeeper's besetting sin and the greatest of all causes for failure in beekeeping. The commercial beekeeper is compelled to watch his bees closely, while the average farmer is not compelled to do so from a financial standpoint, since his few colonies of bees form but a small part of his income.

The past season, southern New York and northern New Jersey have been the battle ground upon which the State Inspectors have met the enemy and in several cases whole outfits of diseased bee yards have been burned or scientifically treated. In a number of cases where only two or three hives of bees were kept the owners did not even know what had caused their bees to die, as the interior of a hive badly infected with foulbrood is just as clean in its general appearance as a healthy hive. But not so with the brood combs, where with very little experience one can detect the disease by its odor and appearance.

Every beekeeper should make it a practice to "heft" the hives where the bees do not seem to be acting right, and if found to be light in weight it is a safe bet that something is wrong inside and a thorough examination should be made at once.

W. Parker Smith,  
New York.

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Select Untested.....	2 25	9 50	18 00	1 75	9 00	15 00	1 50	7 50	13 50
Tested.....	3 00	16 50	30 00	2 50	12 00	22 00	2 00	10 50	18 50
Select Tested.....	3 50	19 50	35 00	3 00	16 50	30 00	2 75	15 00	21 00

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## THE BEEKEEPERS LOOKOUT

### DOES A BUG THINK?

Allen Latham has stirred up a big discussion when he assumes that bees do not reason. Lovell and Burrill have each put in a word to tell of things which bees do, that indicate some degree of mental activity. There is no reason to believe that one kind of insect may differ from another in the nature of its

all is still again. If you get up early in the morning, just as the dawn is breaking, you are likely to repeat the experience with the same buzzing and swarming of the beetles of the night before.

The explanation is simply that the big brown beetles spend the day buried in the earth beyond the reach



mental equipment, except perhaps that one may have a larger capacity than another.

Most any observer will tell of things which he has seen in the animal world which will give one something to think about. If you chance to live in the middle west and are delayed at the apiary until after dusk, in early summer, you are likely to hear a sound like the swarming of the bees. The air is suddenly filled with big, blundering beetles, commonly called June-bugs, and the buzzing may be even louder than the swarming note of the bees. This continues for a short period, when

of the insect-feeding birds. As soon as the birds have gone to rest in the evening the beetles come out and fly about in large numbers for a short time before they settle on the tree tops, where they spend the night feeding on the leaves. With the first streak of dawn the birds begin to stir and back go the beetles to bury themselves again in the earth to remain until after nightfall.

There is a very evident relation between the flight of the beetles and the activities of the birds, whether or not the beetles are conscious of it. Can a beetle think? I leave it to my readers to decide.

Frank C. Pellett.

## Meetings and Events

### Illinois Bee Tour

Beekeepers in northern Illinois are in for a treat in the Bee Tour which has been planned by the State Beekeepers' Association for August 10 to 14. This is similar to the tour held in Wisconsin last year, an account of which was given in the September number, 1925, page 443.

The tour will visit prominent apiaries along the route, ending each day where there are suitable and pleasant accommodations both for camping and for hotels. Programs will be given in both the morning and the afternoon of each day. It will be the best opportunity the bee-

keepers of the state have yet had to get acquainted with each other and to learn something of how their neighbor beekeepers do their work.

All the local associations are co-operating heartily and it is expected that there will be an able corps of men from both inside and outside the state to carry on the programs.

The tour will start at the apiary of C. D. Handel, at Savanna, on the western border of the state, and go from there to Polo. From Polo the route is south to Malvern and the apiary of Lee Horning, which is one of the prettiest in the state. The first day ends at the camp grounds

at Dixon, where there are unusually good accommodations.

The second day the tour extends from Dixon to Oregon, Stillman Valley, Genoa, and DeKalb. The third day, from DeKalb to St. Charles and Elgin, south to Batavia, Yorkville, Lockport and Joliet. The fourth day, from Joliet to Morris, Gardner, Dwight, Streator, and Wenona, to end the day at the apiary of Aaron Coppin, one of the most conspicuously successful beekeepers of Illinois. The fourth day the tour goes north to the apiary of State Inspector Kildow, at Putnam, where it ends with a more lengthy program and picnic, with the Ladies' Aid as hosts.

The detailed program will be generally circulated among beekeepers of the northern part of the state, but anyone wishing more information should write to the Secretary of the Illinois State Beekeepers' Association, Hamilton, Illinois, for it. There should be a good crowd and many who will stay the entire five days, with camp outfits, and a disposition to have a good time. Those who can only spend a part of the time will be able to join the tour and leave it at will by following the details of the route and the program.

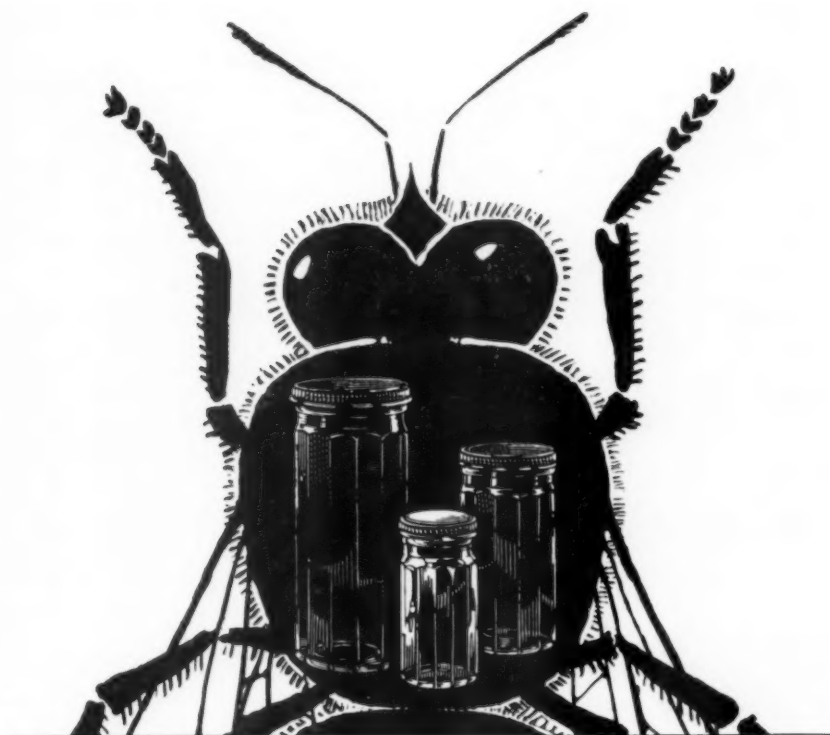
#### Oklahoma Fair, at Muskogee

The readers of the American Bee Journal will remember that Muskogee, Oklahoma, built an apiary building last year for its free State Fair. This year it is publishing a list of fifteen different premiums on bees and honey for its fair, to take place October 2 to 9, with four and five prizes on each. They are also soliciting gifts for a museum of new and ancient implements of the apiary.

For information on all this, write to J. F. Diemer, of Liberty, Missouri, who is superintendent of that department. He is going to make demonstrations of handling bees in the upper story of the apiary building, arranged to hold colonies, with outlets for each in the walls. He says this is going to be the best fair in the history of Muskogee.

#### Langstroth Memorial Plans Being Completed

One of the best meetings ever held in this country will be the Root-Langstroth Memorial, at Medina, Ohio, September 21, 22, 23. The Ohio association, which is sponsor for the meeting, and the folks at Medina have been working hard all summer for the success of it, and, from the published statements about it, it will be one of the largest gatherings of the craft that has ever



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assembled in honor of fellow workers.

Full details of the program and accommodations can be had by writing Miss Florence Naile, Secretary of the Ohio Beekeepers' Association, 118 West Northwood avenue, Columbus, Ohio. We had expected to receive further details by this time, but at the date of going to press they are not at hand.

## Chas. H. Robinson to Tacoma, Wash.

Friends of C. H. Robinson, the active Vice-President of the Illinois State Beekeepers' Association, will be glad to learn that he is to become a 100 per cent beekeeper in his new home near Tacoma, Washington. Robinson has been a beekeeper for years, but made his bread and butter from superintending the mechanical work of the Bloomington and Normal street railways. His new life will not be entirely a change, but so removed from railway work that he will feel like a boy with a new top.

A few weeks ago Robinson sent in a clipping the heading of which read: "100,000,000 bees wanted in Wenatchee Valley by fruitgrowers." Will he supply them all? Some contract.

## West Central Minnesota Honey Producers

The West Central Minnesota Honey Producers' Association held its annual field day and picnic on July 14, near Graceville, Minn., with an attendance of around seventy. The principal speaker was Rev. P. J. O'Connor, of Renville, Minn., President of the Minnesota Beekeepers' Association, who emphasized co-operation with the state association on marketing of honey. Box-nailing contests were held for the men and women separately; also, a smoker-lighting contest. These diversions proved exciting and interesting. Since there are forty-four nails to each box, the winners were given a graduated scale of points from 44 to 50, according to their finishing order. Then, for each bent-down or split-out nail one point was deducted. Among the ladies the last one finishing won second place, because she had all forty-four nails driven correctly, thus demonstrating that the contest emphasized skill as well as speed. Prizes were awarded by local bee supply houses.

B. L. Morehouse, Sec'y-Treas.

## Missouri State Fair

The twenty-sixth annual exposition will be held at Sedalia, Missouri, August 14-21. Four hundred dollars is offered in premiums for the apiary section. Exhibits must be in place by 6 p. m., August 13.

## In Memorium

Readers of the American Bee Journal see each month on its title page two faces which are more or less familiar to them. The one at the upper right, Mr. Charles Dadant, is doubtless well known to all, not only for his own work for the advancement of apiculture in this and other countries, but also through his equally distinguished son, Mr. C. P. Dadant, and his grandsons. Happily, the beekeepers of Wisconsin, Illinois, Iowa and Minnesota have combined in holding a great gathering of beekeepers at Platteville, Wisconsin, August 17 to 20, in honor of the Dadant family.

The face at the left may not be so well known, especially to the younger generation of beekeepers. And yet as well might the youth of this country forget our Washington and our Lincoln as for beekeepers to forget the name of Rev. L. L. Langstroth, whose labors made possible their industry—who sowed that they might reap. His was the inventive genius that bridged the gulf between the old box-hive beekeeping of the past and the modern methods of today that have placed American apiculture so far in advance of that of other countries. "Imagine, if you can," wrote Doctor Charles C. Miller, "all the frames in all the hives of bees suddenly becoming immovably fixed, never to be taken out again except as they were cut out, and you will have a fair idea of what beekeeping was for more than two thousand years, until Langstroth gave us the movable-frame hive."

Out in Woodlawn cemetery at Dayton, Ohio, one of the most beautiful cities of the Middle West, a pile of gray granite marks the last long sleep of our "Father of American Beekeeping." This monument was erected by a few grateful beekeepers, and is the only expression of appreciation that has ever been made for the man whose invention revolutionized beekeeping throughout the whole world, for his movable-frame hive is used today by nearly a million beekeepers in this country, and by millions in other lands.

Great as is the debt that modern apiculture owes Langstroth for the invention of this hive, it owes him almost as much for the first scientific and popular book on beekeeping in the United States, which made his hive and its manipulation known to beekeepers. This book, as revised by Mr. C. P. Dadant in 1922, is one of the most outstanding works on this subject in any language.

The years have only added luster to his name, and the Langstroth Memorial now established at Cornell University is attracting world-wide

attention. Funds are being raised by our beekeeping friends across the seas in honor of the great bee master, the first contribution from foreign lands coming from M. Giraud, President of the French Federation of Beekeepers. Since the article in the June issue of the Journal was sent in, the following names have been added to the Langstroth Memorial Committee: Philip J. Baldensperger, of Nice, France; C. B. Gooderham, of Ottawa, Canada; Cary W. Hartman, of Oakland, California, and H. F. Wilson, of Madison, Wisconsin.

Comments on the Root-Langstroth memorial meeting to be held at Medina, Ohio, on September 21, 22 and 23, and on the Langstroth Memorial at Cornell University, have appeared in more than twenty foreign bee journals, all heartily approving the action that has been taken. The eyes of the beekeeping world will be turned toward Medina in September, and all good wishes will be with us.

Florence Naile,

Sec'y Ohio Beekeepers' Ass'n.

(A photo of the Langstroth tombstone was sent to us to accompany this article, but was received too late for this number. It will appear in September.—Editor.)

#### Warehousing Extracted Honey

"You may be interested in learning that extracted honey has just been made storable under the United States Warehouse Act.

"In other words, the Department is now in position to license public warehousemen for storage of extracted honey. Licensed warehousemen will be authorized to issue Federally licensed warehouse receipts against extracted honey entrusted to their care.

"Dealers in extracted honey, as well as producers, will probably find the Warehouse Act of as much assistance in the honey industry as it has been found in the marketing of other storable commodities, such as cotton, tobacco, wool, peanuts, etc. It occurs to me that you may desire to take advantage of the recent extension of the act."

We clip the above from a circular of the Bureau of Agricultural Economics of the United States Department of Agriculture. The main advantage of this arrangement is that it will enable beekeepers who wish to keep extracted honey for a better market to warehouse it and borrow money upon the warehouse receipt. Write to the Government Printing Office at Washington if you wish a copy of the "Warehousing Farm Products."

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5 lb. pails, per carton of 100	6.75
10 lb. pails, per carton of 50	5.00

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5 lb. pails, per case of 12	\$1.10
10 lb. pails, per case of 6	.90
60 lb. cans, 1 per case	.90
60 lb. cans, 2 per case	1.25

Above packed in wooden reshipping cases

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8 oz. honey capacity, Tall or Fluted, per case of 24	\$1.05
16 oz. honey capacity, Tall or Fluted, per case of 24	1.35
32 oz. honey capacity, per case of 12	.95

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Single tier with 2-inch glass fronts

To hold 12 4 1/4 x 4 1/4 1 1/2-inch sections	10	100
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To hold 24 4 x 5 1 1/2-inch sections	3.90	34.50
To hold 24 4 x 5 1 1/2-inch sections	8.60	31.50
Double tier with 2-inch glass fronts		
To hold 24 4 1/4 x 4 1/4 1 1/2-inch sections	4.20	37.50

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Untested, 1 to 12, 70c each; 12 to 50, 65c each; 50 to 100, 60c each. Tested queens 50c each more than untested queens. Breeders \$5.00 to \$25.00 each.

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### N. D. Beekeepers in Annual Summer Meeting at Carrington

The annual summer meeting of the North Dakota Beekeepers' Association was held at Carrington, June 30. Several bee yards near Carrington were used to demonstrate the best methods of beekeeping.

The subjects discussed were: "Beekeeping Management," "Granulation and Chemistry of Honey," "Queen-Rearing," "Wintering Bees," and several other topics of importance to bee men.

Among the speakers were Frank C. Pellett, Hamilton, Ill., Field Editor of the Bee Journal; Prof. Francis Jager, head of the beekeeping department of the University of Minnesota; Prof. J. A. Munro, Secretary of the North Dakota Beekeepers' Association; J. A. Kitchen, State Commissioner of Agriculture and Labor; Dr. M. C. Tanquary, commercial beekeepers of Chaffee, N. D.; Mayor W. F. Boylan, of Carrington. Mayor Boylan welcomed the bee men to Carrington at the dinner given by the Kiwanis Club.

### New Yorkers to Have Rea Back Again

Note was made in the Journal for July that R. B. Willson had left his position as Extension Specialist in Apiculture for New York State to enter the service of the Hershel Jones Marketing Service, Inc., New York City. Now comes word that George H. Rea, formerly the Extension Specialist, has been brought back from Pennsylvania to take Willson's place.

This is good news. Rea will be welcome, since he is well known to the majority of New York beekeepers. He will start work at Cornell about October 1.

### Michigan Summer Meetings—Port Huron August 12-13, Boyne City August 18-19

Arrangements are being completed for the program and entertainment of beekeepers attending the two summer meetings of the Michigan Beekeepers' Association. The Port Huron meeting will be held at the Garfield Junior High School, and the Boyne City meeting in the Chamber of Commerce. In both cities splendid parks and camp sites are available for those who wish to camp out during the sessions.

We have out-of-the-state speakers. Professor F. E. Millen, Ontario Agricultural College, Guelph; Mr. Huber Root, of the A. I. Root Company, Medina, Ohio; Mr. E. W. Atkins, of the G. B. Lewis Company, Watertown, Wisconsin; Professor J. A.



Munro, of the North Dakota Agricultural College; Mr. M. C. Berry, Montgomery, Alabama, and possibly others who will appear on the program. Local beekeepers have taken charge of the plans for the entertainment of visiting members and promise a most cordial welcome for all who attend.

These two meetings will be preceded by a joint meeting of the Lenawee County and Maumee Valley, Ohio, Beekeepers' Associations, which will be held at the home of Mr. E. C. Gray, Sylvania, Ohio, probably August 10. Mr. Gray will have several attractions on exhibit for the occasion, and outside speakers will also appear on the program. A cordial invitation is extended to all southern Michigan and northern Ohio beekeepers to attend. Further particulars will be announced later.

Russell H. Kelty.

#### Goshen, Ind., Meeting

The Midwestern beekeepers' meeting will be held at Goshen, Ind., in the Maccabee hall, August 23 and 24. A good program has been arranged, with a banquet the second day of the meeting.

#### Interstate Meeting

The joint meeting of Iowa, Minnesota, South Dakota and Nebraska beekeepers held at Sioux City in June was a very successful affair. Beekeepers from six or more states were present. The first day was devoted to a program with several well-known speakers giving addresses. The second day was given over to a tour, during which several apiaries were visited. There are several large-scale beekeepers in the vicinity of Sioux City, and much interest was manifested in their equipment and methods of management. Such interstate meetings should be held more frequently, to give the men from larger regions an opportunity to get acquainted. So successful was this meeting that it was decided to make it an annual affair.

#### Dr. Phillips and Wife in Europe

Dr. Phillips is sending postals to his friends from Europe. We have one from Evoline, in southern Switzerland, signed by half a dozen beekeepers besides our two tourists.

#### Ants, Bees and Wasps

A little book by Edward C. Ash, published by Robert Holden & Co., of London, in the "Nature Lover's Library," is on our desk. It is entitled "Ants, Bees and Wasps," and gives descriptions, with 140 drawings, of the different breeds. Ten pages are devoted to the honeybee.

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5-lb. Friction-Top Pails, per carton of 50	3.50
10-lb. Friction-Top Pails, per case of 6	.90
10-lb. Friction-Top Pails, per carton of 50	5.00
2 1/2-lb. Friction-Top Cans, per carton of 100	4.00
60-lb. Square Cans, per case of two cans	1.25
60-lb. Square Cans, per case of one can	.80
60-lb. Square Cans, in bulk, each	.40
16-oz. Round Glass Jars, per case of 24	1.25
6 1/2-oz. Tin-Top Tumblers, per case of 48	1.50

All above prices are F. O. B. Boyd, Wis.

Prompt shipment guaranteed

Write for prices on comb-honey shipping cases

**August Lotz Company, Boyd, Wisconsin**

QUEEN TALKS By M. J. Deyell. Talk No. 10

### HAVE YOU STOPPED TO THINK?

During the rush of this busy age there is a tendency to let others do our thinking for us. Don't do it.

Beekeepers, in order to secure the maximum crop of honey, must have their colonies boiling over with bees superior in honey-gathering qualities when the major honeyflow starts.

Carefully conducted tests have shown that it pays in dollars and cents to requeen annually and to have every colony headed with a young, prolific queen of a known honey-gathering strain.

August is one of the best months in which to requeen.

#### ROOT QUALITY ITALIAN QUEENS

Quantity:	1 to 9	10 to 24	25 to 49	50 to 99	100 or over
Untested	\$1.20 each	\$1.00 each	\$0.90 each	\$0.80 each	\$0.75 each
Select Untested	1.50 each	1.40 each	1.20 each	1.10 each	1.00 each

Note: Our Untested and Select Untested laying queens prove to be approximately 99 per cent purely mated. These are young, fertile queens, reared this season.

**THE A. I. ROOT COMPANY, MEDINA, OHIO**

## Honey Jars at Prices to Save You Money

Get our prices on 32 oz., 16 oz., 8 oz.  
and individual sizes

**DADANT & SONS, Hamilton, Illinois**

## FOREHAND'S ITALIAN QUEENS

are leaders in honey getting, gentleness and beauty. They have been bred for the highest qualities for 33 years

Untested queens 60c each up to 12; 12 to 25, 55c each

100 per cent live delivery and perfect satisfaction guaranteed in United States and Canada. Write for prices in large quantities.

**N. FOREHAND, GONZALEZ, FLORIDA**

### AUGUST QUEENS 60c EACH

Untested, 1 to 25, 75c each; 25 or more, 60c each. Tested, \$1.50 each.  
Extra select tested, \$3.00 each.

These Queens Winter Well and Get the Honey

**D. W. HOWELL, Shellman, Georgia**

### "Chrysler's Process Foundation"

takes no second place in comparative tests. It is not stretched in the milling, consequently has more cells to the comb than other processes, made of pure beeswax, and refined without acids. We have ample stock and capacity to supply large or small orders. Satisfaction guaranteed; 35 years' experience. Reference, Bank of Montreal. Manufacturers of other supplies. Send for catalogue.

**W. A. CHRYSLER & SON, Chatham, Ont.**

### ALBINOS

are the most beautiful bees you ever saw—virtually sheiks in the bee world. Their white fuzzy coats are very luxuriant. Albinos are extremely gentle, very prolific, and as honey gatherers they are unequalled.

It is a remarkable fact that these bees do not readily hybridize. They retain their individuality. In this region they are found in many small, neglected apiaries in their purity. Having been neighbors for many years of black bees and Italians, they prove to the world that they do have the ability to keep themselves pure and uncontaminated.

We have had these bees in our yards for over twenty-five years and have found them to be better bees in every respect than any Italians that we have ever tried. I have the original stock of the noted beekeeper who perfected them over forty years ago.

Try a few of these queens. I know you will be pleased with their appearance, the character of their workers and their wonderful capacity as honey producers.

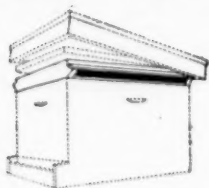
I am prepared to furnish Albino queens at the following prices: Untested, \$2.50 each; dozen lots, \$2.00 each. Breeders (limited number), \$15.00 each.

Send for circular. Order early. Orders filled in rotation as received.

**Sterling Nusbaum, Taneytown, Carroll County, Maryland**

### THE HOT WEATHER IS HERE—

**Are You Prepared to Ventilate Your Bees?—**



Write for booklet and trial offer

**A Cool Hive Means More Honey**

A trial order will convince you of this fact

Write for free booklet

**HEIM BEE VENTILATOR CO., Three Rivers, Texas**

### Bears Take Joy Out of Beekeeping

R. W. Scott, of Bolton, North Carolina, finds that black bears have a sweet tooth. After losing some of his hives, he conceived the idea of building a stout wire fence around his apiary. He did so and some of the oldtimers down in the swamps of Columbus county laughed at him. Mr. Scott did not know the cause of this mirth until he went back a few days later and found that a bear had bundled up the wire between two posts and gone on in.

"That bear picked up a hive and went to the fence with it. He found he couldn't get over, so he went back and got another. Still hunting a light one that he could manage, he piled up twelve of my hives along that fence before he found one he could handle," says Scott. "Such a mess of bees, honey, comb, and hives one never saw. It was then I started trapping bears."

### Getting Package Bees Without a Funnel

While this story is about filling packages, the method is equally applicable to filling a swarmbox in a pinch:

Recently on arrival at an outyard it was desired to secure a few three-pound packages, but it was discovered that the funnel had been overlooked. The honey house was vainly searched for stiff paper to make one.

Casting about for some means to use in lieu of a funnel, a comb box was spied. The bees were shaken into this, the box being kept covered as much as possible with an inner cover—an oilcloth in our case,—and when approximately enough bees were in the box, the box was jounced sharply on the ground to throw the bees in one corner, then the bees were poured into the cage like so much water. It worked.

M. R. Blood.

### Hungarian Bee Magazine in U. S.

"Amerikai Meheszet," American Beekeeping, is published in South Bend, Indiana, in the Hungarian language. The editor makes the statement that there are at least 40,000 Hungarian farmer-beekeepers in the United States, 75 per cent of whom cannot speak the English language, and he proposes to help them. The first number is of eight pages, a little larger than the American Bee Journal, on good paper, and evidently means business. Welcome to the new magazine!

# Crop and Market Report

Compiled by M. G. Dadant

For our August crop and market report we asked our correspondents to answer the following questions:

1. How is the crop compared to 1925?
2. What are the prospects for the balance of the season?
3. What prices are being offered on honey?
4. What are your ideas as to prices that should rule on honey this fall?

## THE HONEY CROP

There has undoubtedly been a lot of disappointment to beekeepers this year, conditions not having turned out nearly so well as seemed to be indicated early in the Spring. It would appear now that the final crop for the year would surely not be in excess of 1925, and might rule considerably smaller, chiefly due to the short crop in the white clover states of the East and Central West, and of the Plains, with also a considerably shorter crop in the sweet clover states on the Plains.

The following states report conditions somewhat ahead of last year, as will appear from the percentages accompanying: Maine, 125 per cent; Massachusetts, 125 per cent; Virginia, 130 per cent; Carolinas, 120 per cent; Florida, 130 per cent; Alabama, 120 per cent; Tennessee, 110 per cent; Louisiana, 125 per cent; Texas, 135 per cent; Oklahoma, 125 per cent; Colorado, 110 per cent; Idaho, 120 per cent; California, 130 per cent. Outside of a few south counties in California, that state seems a disappointment of earlier production expectations.

Those on a parity with last year are Vermont, Connecticut, Georgia. There are in addition several states which are seemingly very close to a parity with 1925, as follows: Indiana, Mississippi, Montana, Wyoming, and Nevada.

Other states which apparently are under last year's production, but which may make up the loss, are as follows: Michigan, 80 per cent; Wisconsin, 75 per cent; Utah, 80 per cent; Washington, 80 per cent; New Mexico, 75 per cent.

In the following states it would seem impossible to reach the production of a year ago, even with very satisfactory later flows, owing to the very small percentage so far gathered: New York, 60 per cent; Pennsylvania, 40 per cent; Ohio, 50 per cent; Maryland, 40 per cent; Minnesota, 60 per cent; Illinois, 45 per cent; Iowa, 60 per cent; Missouri, 40 per cent; North Dakota, 60 per cent; South Dakota, 50 per cent; Nebraska, 30 per cent; Kansas, 35 per cent; Arizona, 60 per cent.

Undoubtedly there is no reason to doubt but that the eastern and central states will be able to dispose of all of their honey without difficulty. In fact many beekeepers will have to buy if they are to keep supplied the trade which they supplied during the past few years. The Southeast is disposing of all their honey in that section and at satisfactory prices, thanks to the influx of population into those sections, chiefly for recreation.

Texas undoubtedly will do the same and at probably the same prices as before.

## CROP PROSPECTS

Crop prospects are very much spotted, being in many sections dwarfed by the drought, and in many others apparently reduced should the cool weather continue. With very few exceptions, reporters expect no more honey from now on than during the same period last year, and many of them are frank in asserting that prospects are very much less than a year ago.

## PRICES OFFERED

Very few buyers are abroad, partly due to the fact that there was a rather large carryover this spring, and partly to the fact that the uncertainty of crop made a like uncertainty of price. However, such quotations as we have gotten wind of would lead one to believe that, at the beginning of the 1926 honey market, prices offered on large lots of honey generally would not be as high as last year by from one to two cents per pound. Some of the offers made and the sections so reporting are as follows: Florida tupelo, 11½ to 12 cents (as high or higher); Mississippi in barrels, 9 cents (satisfactory); Louisiana, 7 to 8 cents; Michigan, 8 to 10 cents; Iowa, 8½ cents, carlots; North Dakota, 7½ cents, carlots; Nebraska, 8 cents; Wyoming, 6½ cents, carlots; Utah, 7½ to 8 cents, carlots.

Undoubtedly these extremely low prices are a reflection of the present apparent stagnation of the market, as well as an echo of the prices at which honey of last year's crop has recently sold. Brokers are now quoting honey but little higher than prices proposed above, and in fact we have report of one car of 1925 California light amber having been disposed of at a price of 5½ cents.

## WHERE WILL PRICES STABILIZE?

If ever we had the need of co-operative effort on the part of large producers, at least for stabilization of the honey market, it is this year. The whole East and South have a crop which they can dispose of easily at last year's prices. It is the big producers of the West (or at least those who are anxious to sell) that are going to do any demoralization of the honey market that is done, aided, of course, by the buyer, who naturally is looking for the best bargain he can get.

In other words, this year would make it appear that the **burden of proof** lies with the western producers, everything east of the Mississippi being readily able to maintain its prices and dispose of its surpluses one year with another, besides caring for much of the production of the West. It is that top-heavy surplus and that eager anxiety to sell, and sell early, that seems to glut and sag the market.

Personally, the writer sees no reason in carryover and honey crop production, at least, for the apparent drop in prices over last year. It is my opinion that if a share of ill-advised beekeepers should let go their honey at such sacrifices, more than likely they may have reason to rue it before the selling season is over. Or does the price cutter ever rue it? It would not appear that present conditions would warrant much reduction in jobbing prices over a year ago, and most certainly no reduction in retail prices.



## CLASSIFIED DEPARTMENT

Advertisements in this department will be inserted for 5 cents per word, with no discounts. No classified advertisements accepted for less than 35 cents. Count each initial or number as one word.

Copy for this department must reach us not later than the 15th of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

As a measure of protection to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisements of used beekeeping equipment or of bees on combs must be accompanied by a guarantee that the material is free from disease or be accompanied either by a certificate of inspection from an authorized inspector or agreement made to furnish such certificate at the time of sale.

## BEES AND QUEENS

**GOLDEN UNTESTED QUEENS**—Gentle and good honey gatherers as can be found; \$2.00 each. Tested, \$4.00 each. Best breeders, \$20.00. Over thirty years a Golden Italian breeder.

J. B. Brockwell, Barnetts, Va.

**ITALIAN BREEDING QUEENS**, tested in large scale production, \$1.00 each or \$9.00 per dozen.

Clyde V. Fisher, Joliet, Montana.

**AUGUST QUEENS** 75 cents each; 25 for 60 cents each.

D. W. Howell, Shellman, Georgia.

**GOLDEN ITALIAN QUEENS** for balance of season at reduced price. The big, bright, hustling kind (the kind that gets the honey). Satisfied customers everywhere. Untested, 85c each; six, \$4.75; twelve, \$9.00; \$65.00 per 100. Tested, \$1.50 each. Safe arrival guaranteed.

E. F. Day, Honoraville, Ala.

**PETERMAN'S SELECT ITALIAN QUEENS** are solid patch layers. Try them and see meaning strong colonies. We do not take them as they come, but select for laying qualities, size and gentleness. They are early risers and late workers. Prices: One, \$1.00; six, \$5.50; twelve, \$10.00; fifty, \$75.00.

H. Peterman, Lathrop, Calif.

**REQUEEN** with Hollopeter's strain of Italians. Unlike any other and improving each year. Choice untested queens, 1 to 20, \$1.00 each; 20 to 100, 80c each. Circular.

J. B. Hollopeter, Rockton, Pa.

**GRAY CAUCASIANS**—Of the very best breeding stock. Queens are priced as follows: One, \$1.50; six, \$8.00; twelve, \$15.00.

Bolling Bee Co., Rt. 1, Bolling, Ala.

**REQUEEN** your colonies with Graydon's queens. They will gather honey for you. 75 cents each, \$8.50 per dozen.

Graydon Bros., Greenville, Ala., Route 4.

**I AM** now filling orders for Golden Italian queens that are bred for business and gentleness as well as good color. State inspected, delivered safe. Satisfied customers everywhere. Untested, \$1.00 each; six for \$5.25; twelve or more, 75c each.

Hazel V. Bonkemeyer, Randleman, N. C., R. 2.

**SIMMONS QUEENS**—Golden and Three-banded. One, \$1.00; six, \$5.50; twelve, \$10.00. Nuclei (queen included), two-frame, \$5.00; three-frame, \$6.25. No disease. Satisfaction assured.

Fairmount Apiary, Livingston, N. Y.

**FOR SALE**—Three-banded Italian queens, 80c each; six for \$4.75; twelve for \$9.00. Tested queens \$1.50 each.

Robert B. Spicer, Wharton, N. J.

**TRY** my Caucasian queens. Tested, \$2.00; untested, \$1.00. Italian, 60c. By return mail. Yard inspected for protection of diseases.

Peter Schaffhauser, Havelock, N. Car.

**HONEYTIME ALBINOS** are the little moderns of beekeeping. See page 363.

Ransom M. Bliven.

**CITRONELLE ITALIAN QUEENS**—Prompt delivery; every queen guaranteed. See summer prices in large ad on page 357.

**MY** famous three-banded, leather-colored Italian queens, April 20 and May, \$1.25, six for \$7.00; after June 1, \$1.00 each, six for \$5.00.

J. W. Romberger, 3113 Locust St., St. Joseph, Mo.

**BRIGHT** three-banded Italian queens with special introducing cage. See display ad for prices.

J. F. Diemer, Route No. 3, Liberty, Mo.

**ITALIANS**—Strong, hardy, vigorous. None better, few equal. Untested, \$1.00; tested, \$1.25. No disease.

Chas. W. Quinn, La Belle, Fla.

**SALIDA APIARIES** sell only one grade of queens, the best light Italians. Our breeding stock the best obtainable. Prices right, \$1.00 each; 6, \$5.50; 100, \$75.00, after June 1st.

Salida Apiaries, Salida, Calif. T. L. Nicolaysen, Prop.

**QUEENS BY RETURN MAIL**—The package season is over and our two queen yards with more than a thousand nuclei and three experienced men are prepared to care for your queen orders promptly. Why tolerate just ordinary queens when the best queens cost so little? The honey production records of our queens are unsurpassed. 1 untested, 80c; 12 for \$9.00. Tested, \$1.50 each. Safe arrival and satisfaction guaranteed. No disease. Inspection certificate with each shipment. Write for circular and prices on quantities.

J. M. Cutts & Son, R. No. 1, Montgomery, Ala.

**GOLDEN** Italian queens, untested, \$1.00 each; 6 for \$5.40; 12 for \$9.60. Tested, \$1.50. Select tested, \$2.50. Three-banded Italian queens, 1 for \$1.10; 6 for \$6.00; 12 for \$10.80. No disease, safe arrival and satisfaction guaranteed.

Sam Hinshaw, Randleman, N. C.

**1000 SCOTT QUEENS**—In addition to the queens needed in our own yards we will raise 1000 of the same grade for our customers. We rear our own queens because they suit us better than any we have been able to buy. We raise honey-getters that are of good color and not cross. Ready about June 5. One dollar each or \$10.00 per dozen.

The Scott Apiaries, La Grange, Ind.

**GOLDEN** Italian queens, untested, 1 to 5, \$1.00 each; 6 to 11, 90 cents each; 12 or more, 80 cents each. Tested, \$1.50. Select tested, \$2.50. No disease, safe arrival. Twenty years a breeder. Satisfaction guaranteed.

D. T. Gaster, R 2, Randleman, N. C.

**PURE ITALIAN QUEENS**—Untested \$1.00; tested, \$1.50; 2-lb. package, \$3.00. Add price of queen wanted. Safe arrival guaranteed after May 10. Write for prices on colonies.

Birdie M. Hartle, 924 Pleasant St., Reynoldsville, Pa.

**LATHAM'S "She-Suits-Me"** untested 3-banded, \$2.00 per queen from May 15 to June 5. After June 5, \$1.00 each. Packages and nuclei. Introduction insured. Send for circular.

Allen Latham, Norwichtown, Conn.

**FOR SALE**—Choice bright Italian queens. I have been building up this strain for the last 22 years for vigorous hustlers, good winterers, gentleness and fine color. These queens will equal the best on the market. Health certificate goes with queens. Prices: Untested queen, \$1.25; 12 untested queens, \$12.00; 1 breeder, \$10.00.

Emil W. Gutekunst, Colden, N. Y.

**TEN YEARS** of experience in breeding queens of quality Goldens, also gray Caucasians. Golden queens: one, \$1.25; dozen, \$11.50. Gray Caucasians, one, \$1.50; dozen, \$15.00. Pure mating. Safe arrival guaranteed in United States and Canada.

Tillery Bros., Rt. 5, Greenville, Ala.

**FOR SALE**—Golden Italian queens. One untested queen, \$1.00, ready for mailing about May 20; one tested queen, \$2.00, ready June 20. Satisfaction guaranteed. When orders cannot be filled in six days, money returned, unless otherwise ordered.

J. F. Michael, R. No. 1, Winchester, Ind.

**GOLDEN QUEENS**, producing bees yellow to tip and improvement over last year's raising, untested, \$1.00; 6 for \$5.00. Tested, \$2.00. Satisfaction guaranteed. Print your address.

H. G. Karns, Victoria, Va.

**FOR SALE**—Italian queens. Untested, 1 to 10, \$1.00 each; 11 to 25, 85c each; more than 25, 75c each. Tested, \$1.50 each. Satisfaction guaranteed. Ready to ship June 1 to June 10. R. B. Grout, Jamaica, Vt.

**GRAY CAUCASIANS, GRAY CARNIOLANS**—Purity of race guaranteed. Fifteen years of real breeding and expert selection are behind them. Strong, long-lived, and as producers of commercial honey they have no superiors and few equals. Try them. Untested, \$1.50; tested, \$2.50; select tested, \$3.00 each. Ten per cent off on lots of one dozen. Rates on 100 or more. No disease.

Chas. W. Quinn, La Belle, Fla.

**GOLDEN THREE-BANDED** and Carniolan queens. Tested, \$1.00; untested, 75c each. Bees in 1-pound package, \$1.50; 2 pounds, \$2.50; 3 pounds, \$3.25. Safe delivery guaranteed.

C. B. Bankston, Box 65, Buffalo, Leon Co., Texas.

**BRIGHT ITALIAN QUEENS**—One, \$1.00; 6 for \$5.00 or 12 for \$10.00. Write for prices on large orders or package bees.

P. B. Skinner, Greenville, Ala.

**FOR SALE**—Italian bees and queens: 2-lb. packages of bees with queens, \$3.50 each; 1-lb. package with queens, \$2.50. Queens bred with the greatest of care.

O. P. Hendrix, West Point, Miss.

**LEATHER COLORED ITALIAN QUEENS**—\$2.00; after June 1, \$1.00. Tested, \$2.00.

A. W. Yates, 15 Chapman St., Hartford, Conn.

**FOR SALE**—Italian queens ready May 15. One queen, \$1.00; 6 queens, \$5.50; 12 queens, \$10.00.

W. W. Talley, R. 4, Greenville, Ala.

## FOR SALE

**FOR SALE**—Modern eight-room brick home with bath, water system, electricity, workshop and bee cellar, orchard. Eight acres wood lot, about fifteen acres good soil under cultivation, with good barn. Two miles from town, good road, school, churches, etc. Good location for raising bees and queens. Especially good buckwheat location. Average colony yield last year 125 pounds. Reason for selling, must move to Ithaca, N. Y. Cheap at \$6,000. This price will not erect the buildings. Reasonable terms to reliable party.

George H. Rea, Reynoldsville, Pa.

**FOR SALE**—100 colonies bees in 14-frame hives with two queens to hive, 300 10-frame supers drawn combs on wired foundation; extracting outfit complete—Simplicity extractor, engine, tanks, capping melter, steam boiler. Will sell with crop on hive or without the crop. This is a rare bargain. If you are interested, write.

Iris R. Lawrence, Dwight, N. D.

**TWELVE** ten-frame standard dovetailed hive bodies, knock-down, empty, nails and rabbets, \$8.50. Twelve empty supers, knock-down to match, nails, \$5.00. Six ten-frame 4x5 section supers, complete, nailed and painted, used two seasons, \$5.00. One hundred closed and shallow frames, sixty nailed, with wired foundation, some drawn out, \$3.00. One used Jumbo copper smoker, \$1.50. No disease. Above lot for \$20.00. Satisfaction guaranteed.

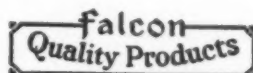
O. S. Ward, Obion, Tenn.

**FOR SALE**—Sixty colonies of Italian bees, 43 ten-frame hives, 17 eight-frame.

John Evanoff, Rt. 4, Galena, Ill.

## FIRST QUALITY—NO SECONDS

5-10 Frame Hives - **\$11.50**



5-10 Frame Supers - **\$4.00**

Sections 2-beeway  $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$  \$10.80 per 1000

Sections, Plain  $4 \times 5$  or  $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$  10.50 per 1000

DEWEY'S FOUNDATION FASTENER **\$2.50**

One operator can put in 1000 top and bottom starters per hour. **Best Machine Made**

*Red Catalog and Booklet "Simplified Beekeeping" Free*

*We Pay Cash for Wax*

**W. T. FALCONER MFG. CO. DEPT. 10 FALCONER, N. Y.**

## RE-QUEEN WITH KNIGHT'S Line Bred Three-Banded Leather Colored Italians

They are the best honey gatherers and best winterers. A customer at Maryfield, Sask., Canada, writes his colonies headed with my queens came out this spring extra strong and doing fine; much better than other colonies headed with other queens.

### PRICES

1 Select (one grade) young laying queen	\$1.00
5 Select (one grade) young laying queens	4.00
10 or more (one grade) young laying queens, each	.75
Tested queens, each	1.50

All queens shipped in large six-hole comfortable cages with 1926 health certificate. Pure mating, perfect queens and safe arrival guaranteed.

**JASPER KNIGHT, Hayneville, Ala.**



## MR. BEEKEEPER—

We have a large plant especially equipped to manufacture the supplies that you use. We guarantee all materials and workmanship. We ship anywhere. We allow early order discounts and make prompt shipments. *Write for free illustrated catalog today. We pay highest cash prices and trade for beeswax.*

**LEAHY MFG. CO., 90 Sixth Street, Higginsville, Missouri**

**J. W. ROUSE, Mexico, Mo. W. R. PERRY, CO., Omaha, Nebr. A. M. HUNT & SONS, Goldthwaite, Texas, Distributors**



## Get Above the Average

When your honey stands beside the best of nationally known foods, in cans, and pails, it must be in a good container to sell equally well.

We have a full line of cans, pails, glass jars, and other standard honey containers.

Compare our prices—Price list on request

**DADANT & SONS, HAMILTON, ILLINOIS**

## Burr Combs

### Mumbled Musings of a Murky Moment

By M. G. Dadant

Well, I've staved off disaster till my turn for burr combs comes again, anyway. You see it's this way. My wife's been offering she'd write my turn of burr combs next time. Now, she's threatening. Sure thing—she'd tell 'em a thing or two about some members of that Bee Journal force that they didn't tell on themselves. She'd let them know what's what. And as long as she's better acquainted with me than any of the others, I've surmised it best to keep my own oar in.

Did you ever have your wife tell anything on you that sounded really funny to the listeners, but made you smile as if you had been caught eating some of the Honey Tea Room candy out of turn and had had a green persimmon thrust into your mouth instead? Sort of a funny feeling, I'd say. You want to grind your teeth, but end up with grin instead, and you make a messy job of both. A castor oil dose couldn't set your jaws in any more perfect accord with your feelings, either.

That's just what I'm afraid of. Not that I know of any skeletons, but I dread the possibilities; also, the boss might delete a part of it, and then where would I be, may I ask? I've heard he deleted something about me in Swanson's last contribution. I'm glad there wasn't space for it.

She played me a scurvy trick today, too (my wife, I mean): Took me at my word that I didn't want to go to the circus and let me stay at work while she and the children went, parade and all.

Oh, well! They say you don't have to be crazy to do the Charleston—but it helps.

I thought it would happen—Pellett's gone and lost us a subscriber, and ruined his reputation as well. It's this way: Just after the July issue came out, we got a letter from a Kansas subscriber ordering his magazine stopped. He said he always thought Frank had snakes. Now, after that July article, he knew it, and didn't want the Journal as a result, for fear it might be catching.

That's nothing. He should have read the letter we just got from Pellett in northwest North Dakota telling about the flood he was in up there. You'd think he had snakes, too. Ever since, we've been looking for him to float in on us up the Mississippi, on a backwash from the

Missouri River junction, a few dozen miles downstream.

He intimates that he's hurrying out of Dakota as fast as he can. Honey evidently coming in freely, because he's had to keep both back doors of the Ford open to keep from getting an overload.

By the time he reaches Wyoming, expect to hear that he's perfected a special can-filling device to take the honey from the fan of his car just as fast as it can be blown from the sweet clover blossoms as he passes by. He has a breezy style.

And by the time he gets to his Nebraska ranch,—well, living in the Sucker State, perhaps the best we can do is to act innocent and say nothing.

Afraid Cale's going to follow, too. He told me yesterday he was having the blues. Didn't know whether he was accomplishing anything. But I can discount that. I happen to know that he was trying to act for the moment in his official capacity as Secretary of the Illinois State Beekeepers' Association. He has to report to the Governor of the state, you know.

Vouchers, schedules; monthly and quarterly reports; duplicates, triplicates, quadruplicates; sworn at, pondered over, sworn to; a white copy, a yellow copy, a green copy and a blue one; no wonder he was blue.

Anyway, don't we all get the blues occasionally? I wonder if they cannot mostly be traced to this high-powered living of ours, that prevents our disporting ourselves as good old Mother Nature intended we should, and substitutes a lot of these gas buggy rides on a hard-surfaced road at a fifty-mile gait instead?

Why, there isn't one in ten of us knows the common trees of the woods, or the birds, or the plants, or the worm-hungry fish. At least, if we do, we hardly take the time to impart this store of information to our offspring. I'm inclined to think it's because we don't know it.

Sometimes I feel a good deal like our two-year-old boy, Phil, did yesterday morning in church. He amused himself by trying to decipher the meaning of a placard on the pew in front of him. He finally turned to his mother and said: "Mother, that says to stop going to church and go out on a picnic right now."

He's the same boy that wished his

nose were above his eyes so it wouldn't get into his glass when he drank.

That same boy, in collusion with his six-year-old brother, earned 35 cents the other day exhibiting a ten-inch hard-shell turtle to passers-by, at a nickel a look. Louis C. went by and was waylaid, but he had only a penny in his pocket and worked a standoff for the other four cents so he could have his look, too. Probably he thought he could in that way get out of full pay, but he reckoned without his creditors.

I personally know that they hounded him till the other four cents were forthcoming, because it was mentioned several times by the older one at bedtime.

And then, of course, we parents feel proud because of the real business acumen displayed in making capital of a passing opportunity. Evidently we feel that it bodes good for the future of these early-budding business heads.

Perhaps, however, instead, we should have spent a full half hour in explaining that the turtle didn't come down from the skies with the rain, as some think, but that it took the unusual opportunity of a flood of rain to start its ramble from the banks of the Mississippi to the Illinois, a hundred miles away, when its wanderings were so rudely interrupted as it clawed its way down Grandma Dadant's front walk at six in the morning.

Isn't there a lot we might have thought of in connection with the habits and life of poor Mr. Turtle, whose first hundred years, they say, are no longer than the second hundred, and who thinks no more of a hundred-mile ramble from the Mississippi to the Illinois than we do in walking across the street to get our morning paper?

Instead of that, our business acumen leads us to stress business foresight, the present day mad scramble rather than the sedate, unhurrying stroll of our more fortunate brother quadruped.

Aye, aye, it's a mad scramble. But it looks like we must keep up with the procession or get engulfed in the stampede.

Here's hoping you get rid of the fowl brood in your bees, get all the suppers put on your gums, read the program of the meeting in *Cleanings* in Bee Culture, and meet me at the Platteville Bee Chautauqua, August 17 to 20.